

FOREST LODGE WARRIEWOOD CIVIL & STORMWATER ISSUE FOR S4.56



SITE BOUNDARY

AREA TO BE
DEVELOPED

LOCALITY AERIAL
NOT TO SCALE

SOURCE : SIXMAPS

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TITLE

COVER SHEET

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Plot Date

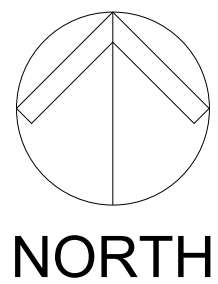
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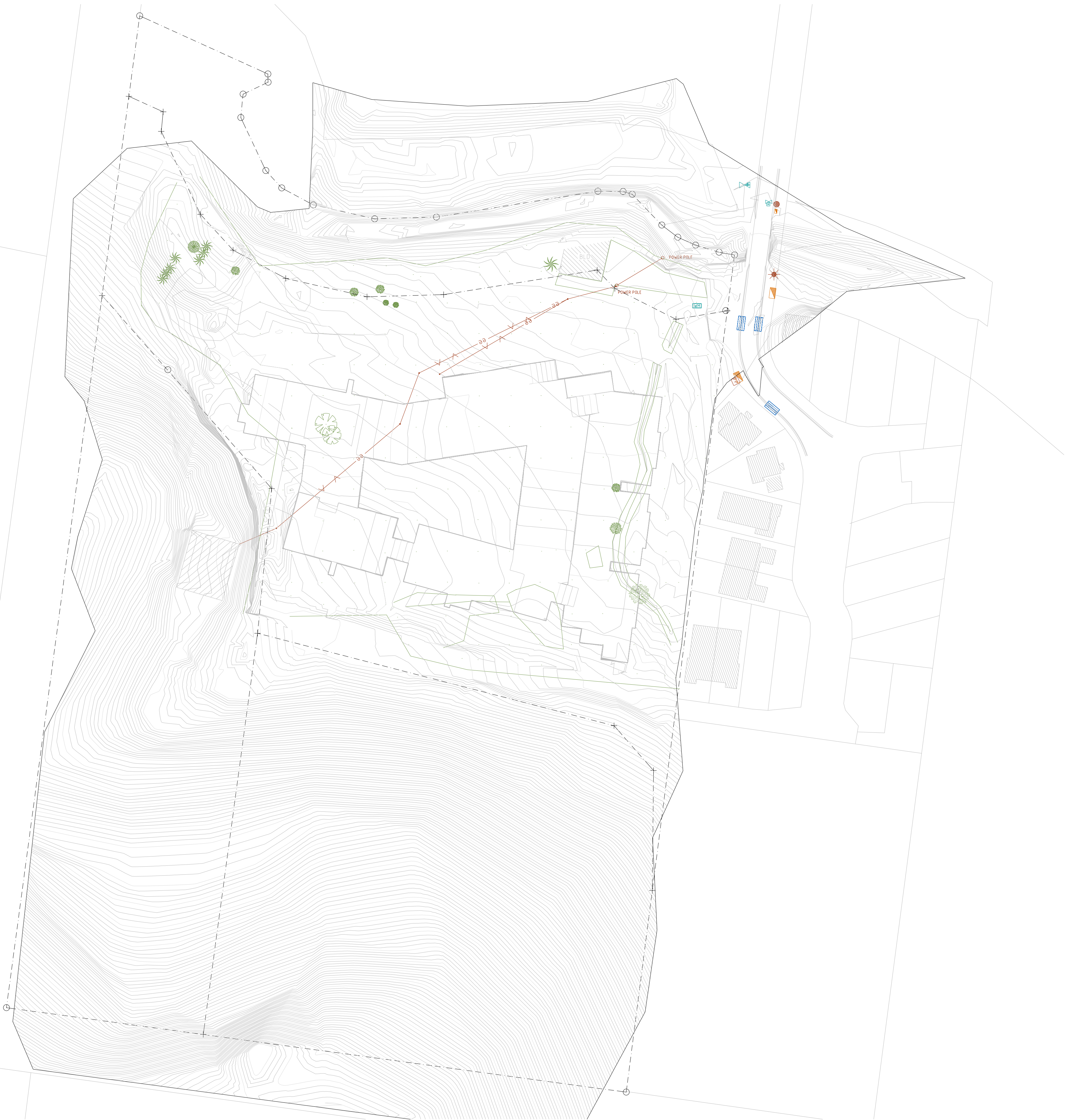
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LEGEND

- SITE BOUNDARY
- EXISTING OVERHEAD ELECTRICITY
- EXISTING WATER MAIN
- EXISTING STORMWATER MAIN
- EXISTING TELECOMMS LINE

REVISION	AMENDMENT	DATE	REVISION	AMENDMENT	DATE
1	ISSUE FOR S4.56	03/11/23			

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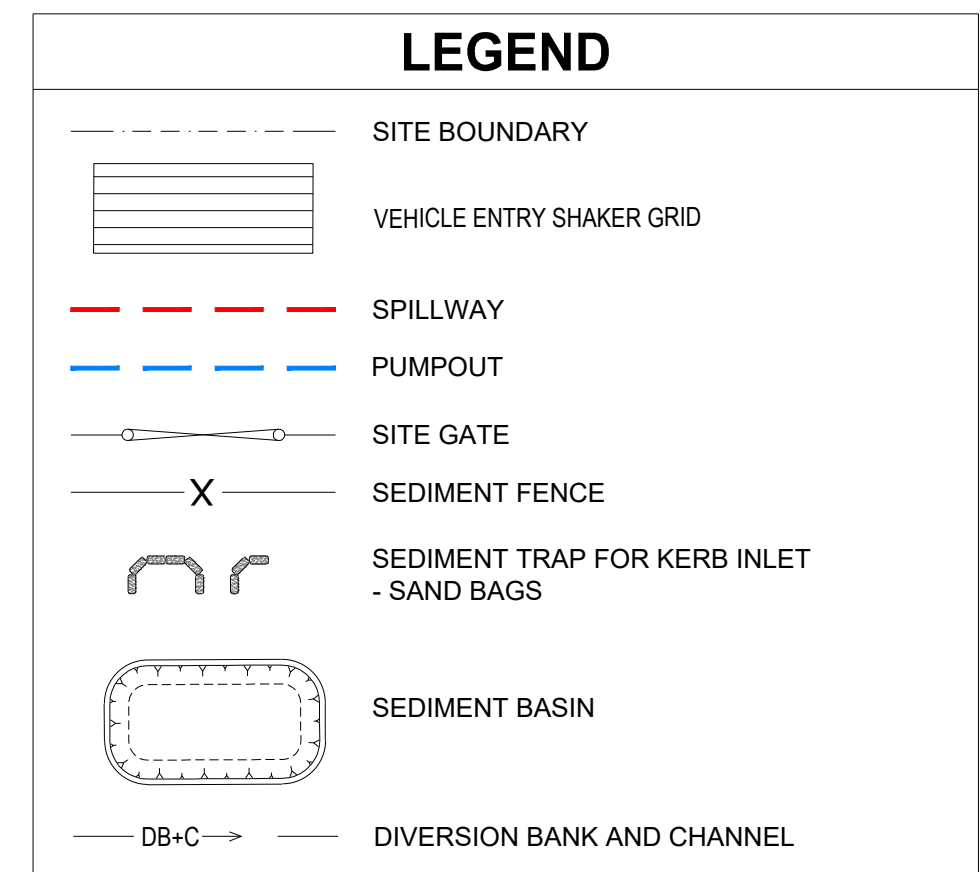
PROJECT

FOREST LODGE
WARRIEWOOD

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TITLE					
EXSITING SURVEY					
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED	
AS SHOWN	I.K.	I.O.	J.G.	J.G.	
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1. GEOTEXTILE INLET FILTER BAGS TO BE FITTED IN ALL EXISTING AND PROPOSED STORMWATER GRATED PITS WITHIN THE DEVELOPMENT AREA WHICH ARE IN USE.
2. STOCKPILE LOCATION SHALL BE DETERMINED ON SITE DURING CONSTRUCTION STAGE. STOCKPILE ARE TO REMAIN CLEAR OF SITE ACCESS, DRAINS AND PAVED AREAS. HEIGHT OF STOCKPILE SHALL NOT EXCEED 2m.
3. INSTALLATION OF ALL EROSION AND SEDIMENT CONTROL MEASURES IS TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE 'BLUE BOOK - MANAGING URBAN STORMWATER'. ALL CONTROLS ARE TO BE INSTALLED PRIOR TO CONSTRUCTION COMMENCING.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE CORRECT INSTALLATION AND ONGOING MAINTENANCE OF THE CONTROLS. REFER TO DRG C2.02 FOR MAINTENANCE REQUIREMENTS.
5. SUITABLE AND APPROVED BINS SHALL BE UTILISED FOR THE CONTAINMENT OF ALL HARD WASTE, INCLUDING CONCRETE SLURRIES, BUILDING WASTE AND LITTER. IN THE CASE OF ACCIDENTAL SPILLS OF SOIL OR OTHER MATERIAL, PARTICULARLY IN THE PUBLIC RESERVE, THE MATERIAL SHALL BE SWEEPED AND CONTAINED AND NOT WASHED INTO A GUTTER.

SEDIMENT BASINS HAVE BEEN SIZED BY USING PROCEDURES DETAILED IN THE 'BLUE BOOK - MANAGING URBAN STORMWATER' FOR TYPE D BASINS. A SUMMARY OF THE CALCULATED AND PROVIDED VOLUMES IS PROVIDED BELOW.

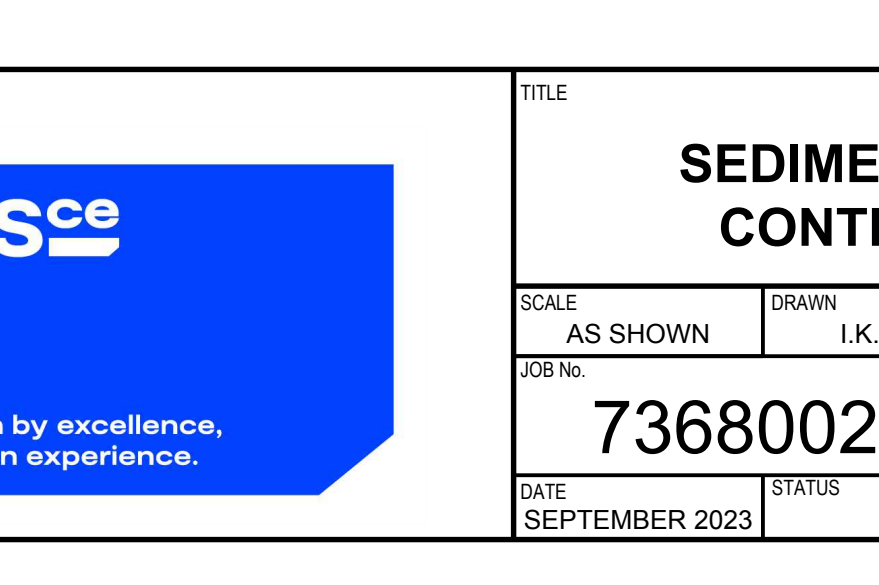
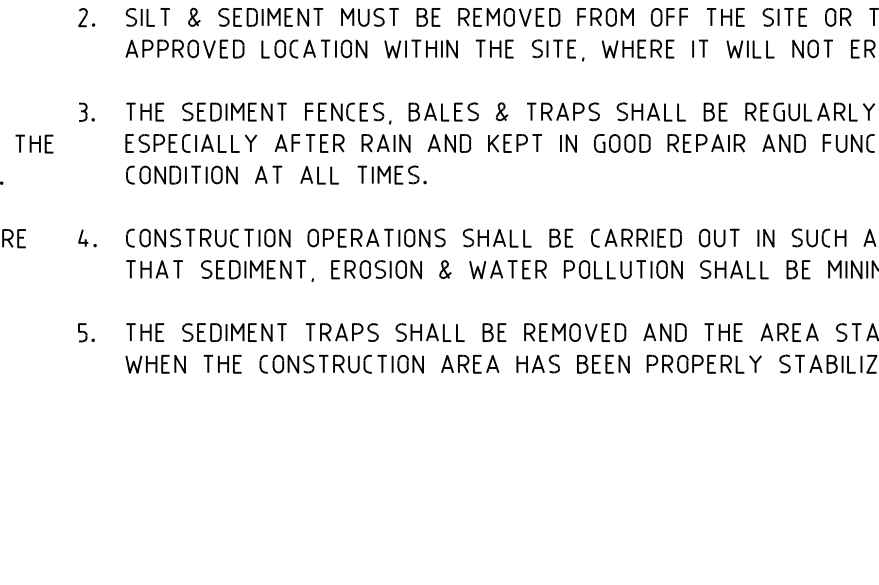
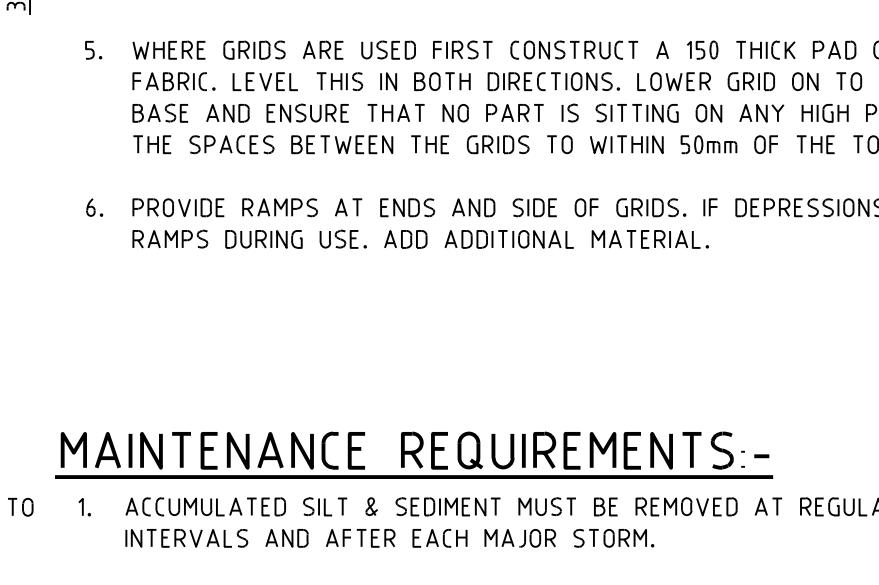
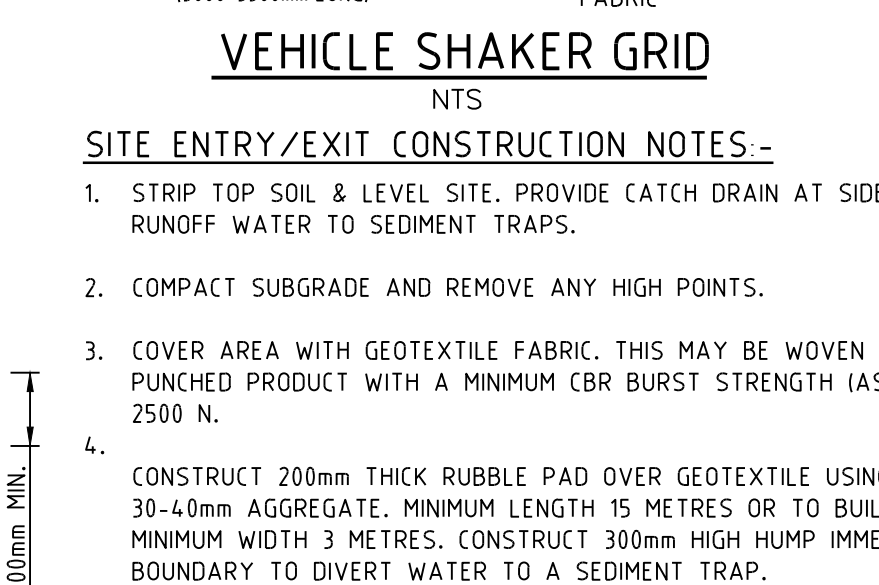
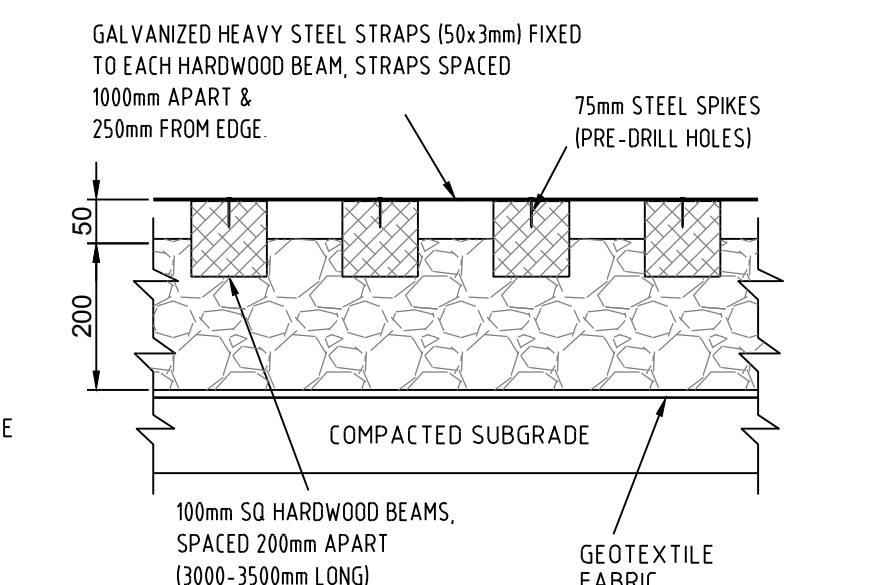
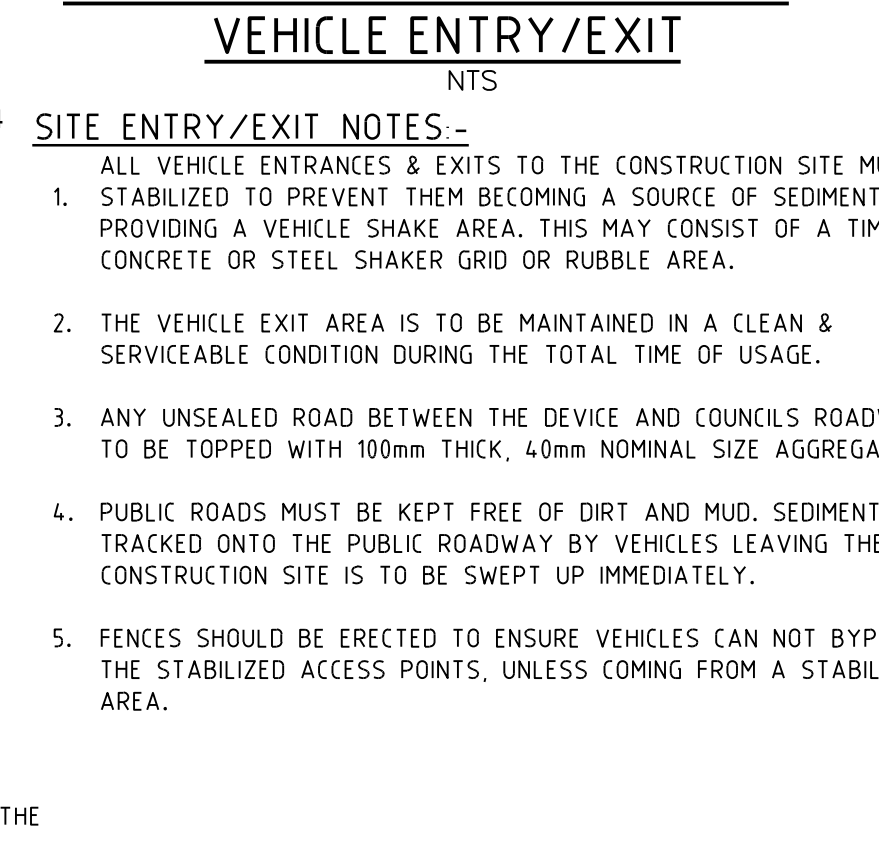
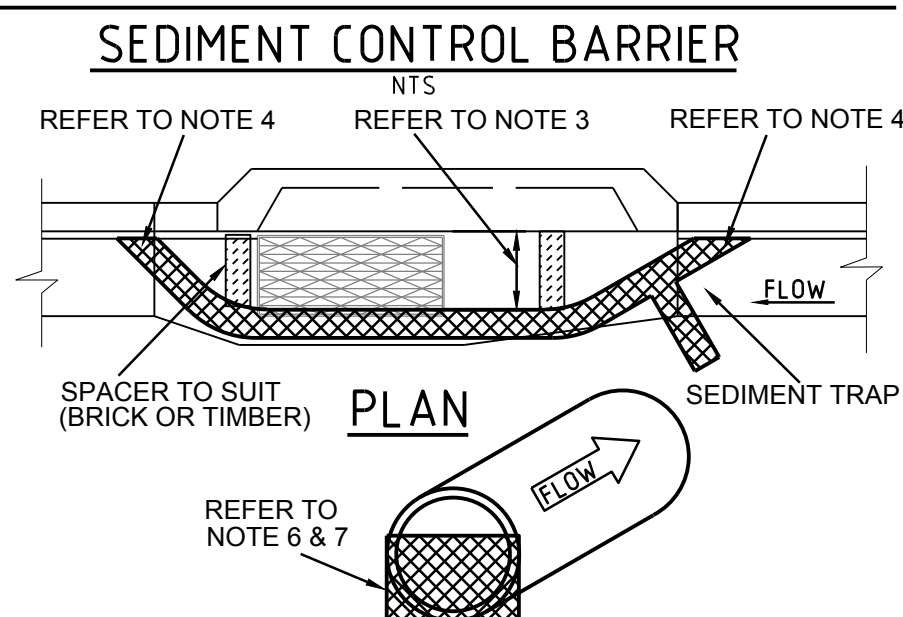
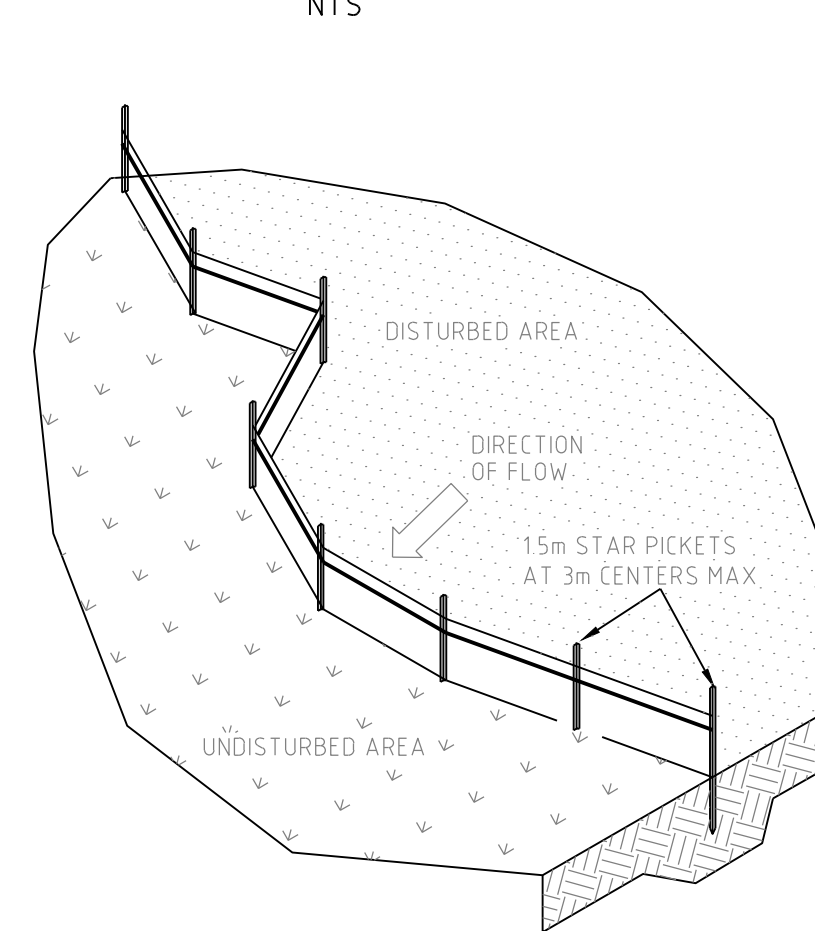
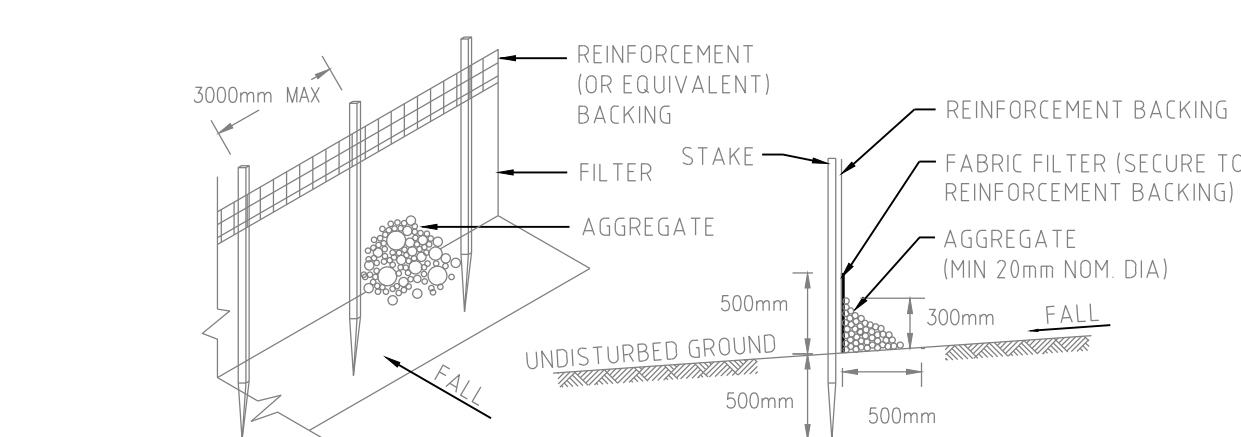
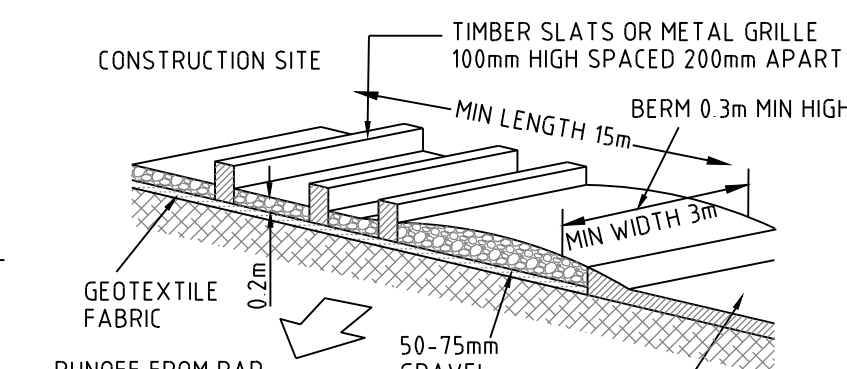
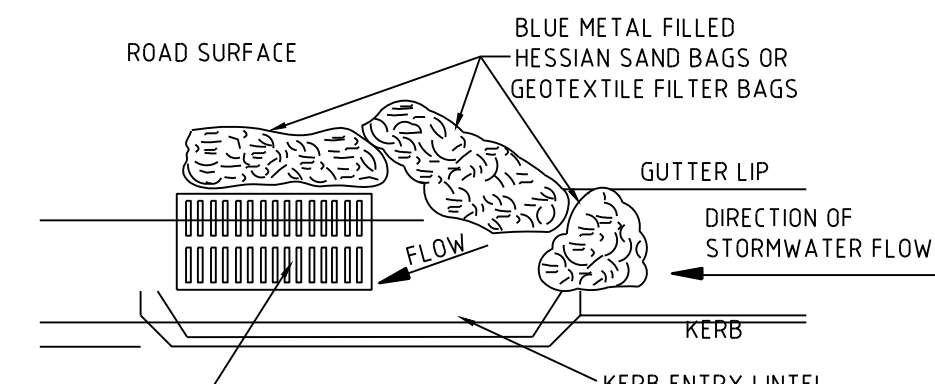
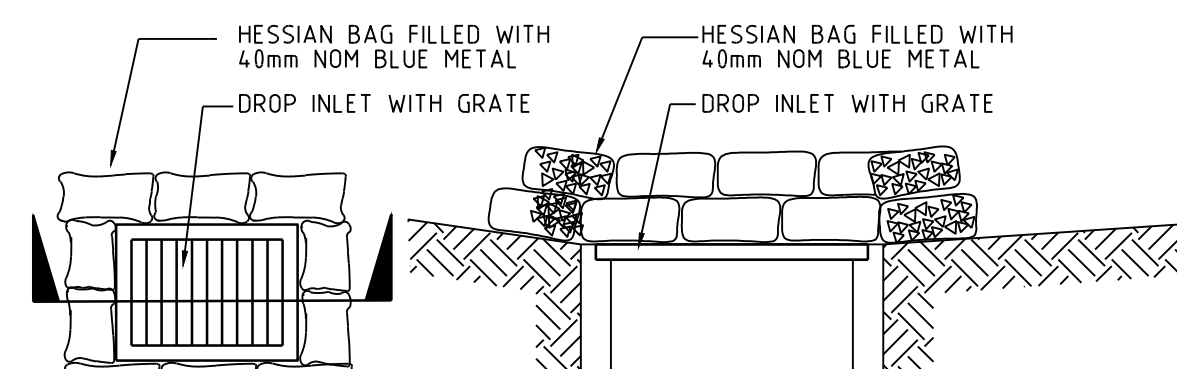
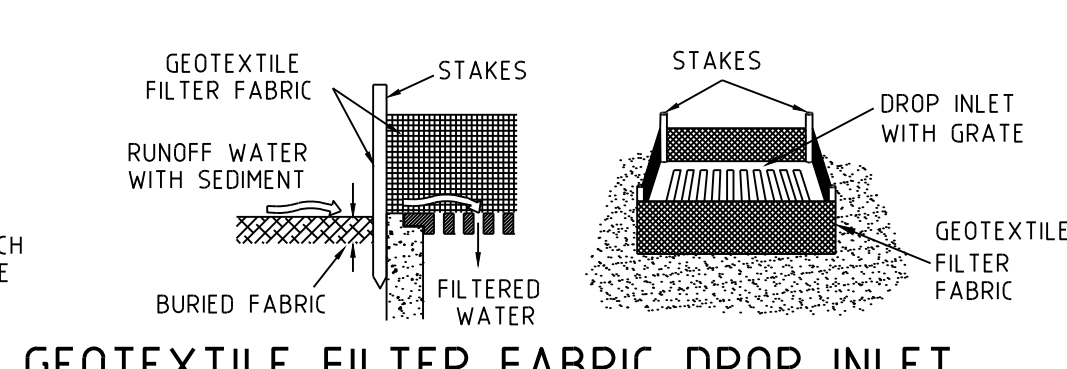
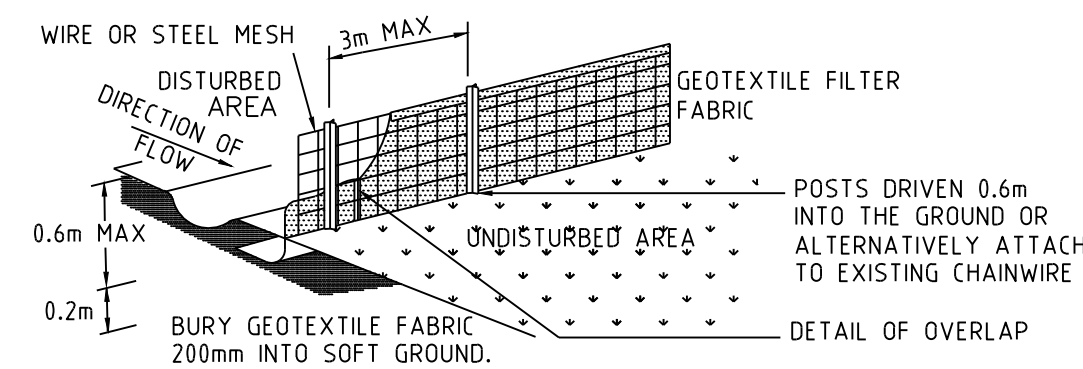
SEDIMENT BASIN 1:	
REQUIRED VOLUME	= 339 m ³
BASE AREA	= 167 m ²
TOP AREA	= 726 m ²
DEPTH	= 2.11 m
MAX SIDE SLOPE	= 1V:2.5H
VOLUME PROVIDED	= 942 m ³

PROVIDE 2m SPILLWAY TO CREEK.

REQUIRED VOLUME	= 376 m ³
BASE AREA	= 157 m ²
TOP AREA	= 511 m ²
DEPTH	= 1.2 m
MAX SIDE SLOPE	= 1V:2.5H
VOLUME PROVIDED	= 400 m ³

PROVIDE 2m SPILLWAY TO CREEK.

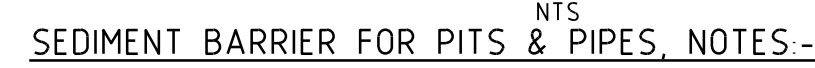
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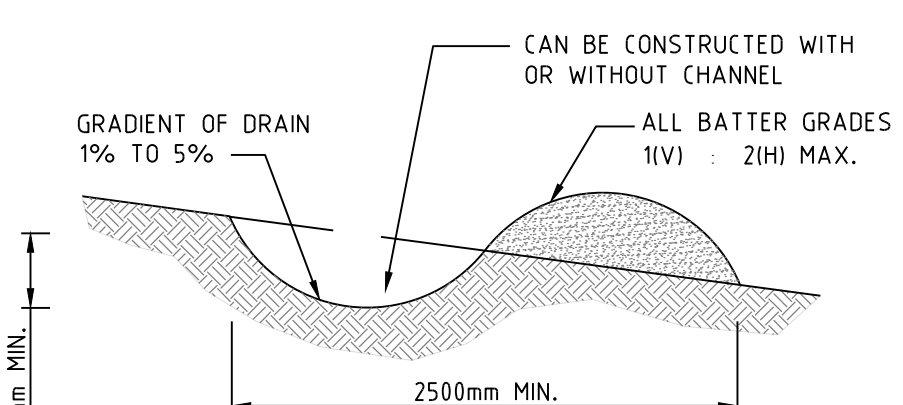
1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF A SLOPE.
2. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND SUFFICIENT TO PROVIDE RIGID SUPPORT, 3 METERS APART, WHERE THERE IS INSUFFICIENT SOIL DEPTH OVER ROCK, HOLES ARE TO BE DRILLED INTO ROCK TO ACCEPT THE STAR PICKETS.
3. ON SOFT GROUND MATERIALS, DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC & COMPACT.
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY THE GEOTEXTILE MANUFACTURER. USE A REINFORCEMENT BAKING WITH NON SELF-SUPPORTING GEOTEXTILE FABRIC.
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
7. ON HARD OR ROCKY GROUND, SMOOTH A 500mm WIDE STRIP UPSLOPE OF THE FENCE LINE, TURN THE BOTTOM 500mm OF THE FABRIC UPSLOPE AND ANCHOR IN PLACE WITH SUITABLE AGGREGATE.
8. WHERE A SEDIMENT FENCE IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE FENCE SHOULD BE LOCATED 1.5 TO 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.



- ### EXCAVATED SEDIMENT TRAP NOTES:-
1. REMOVE THE SEDIMENT WHEN IT HAS ACCUMULATED TO HALF THE DESIGN DEPTH OF THE TRAP AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
 2. PROVIDE 50 cu.m/Ha OF SEDIMENT STORAGE VOLUME.
 3. REFER TO THE MAINTENANCE REQUIREMENTS.

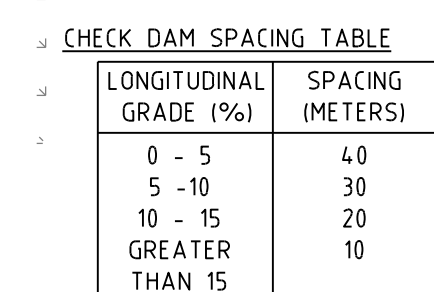
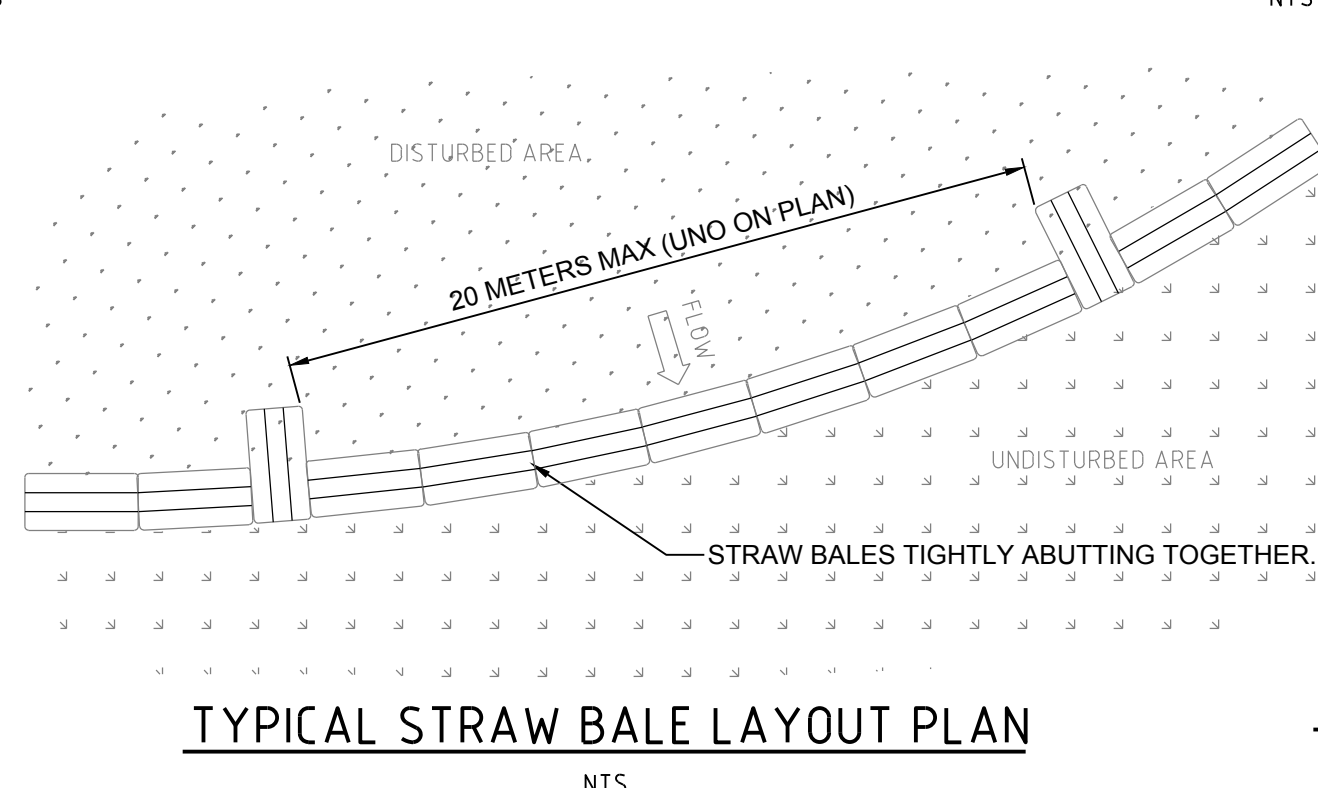
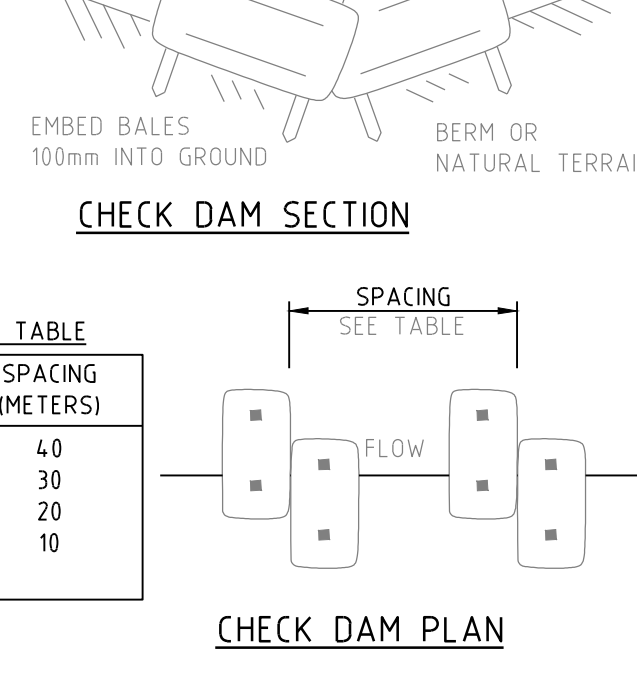
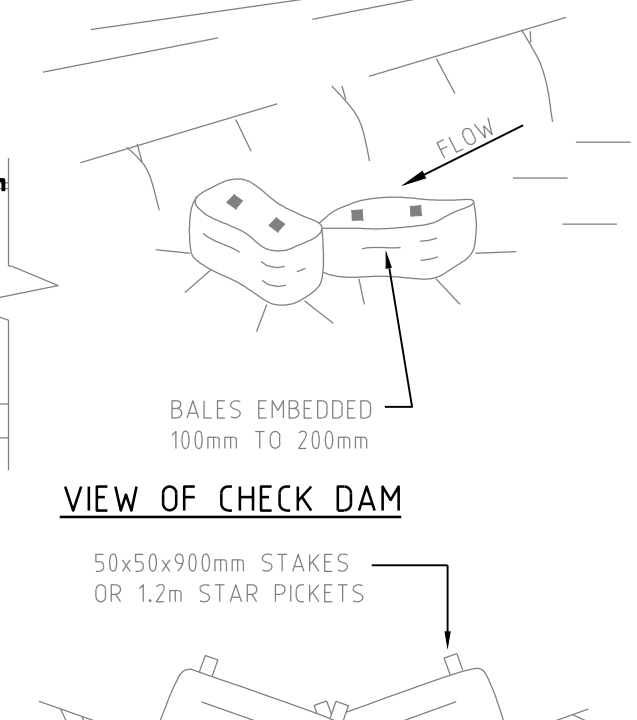
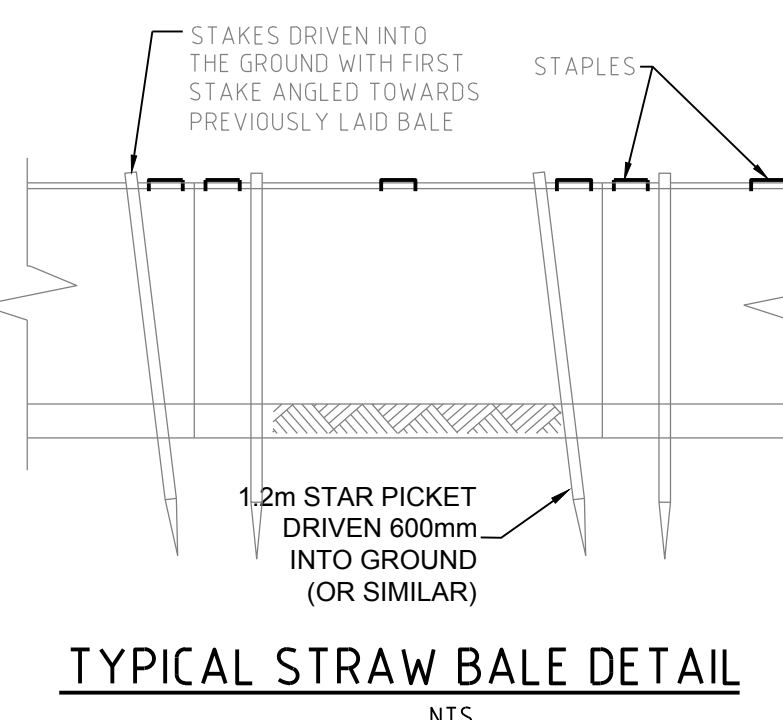
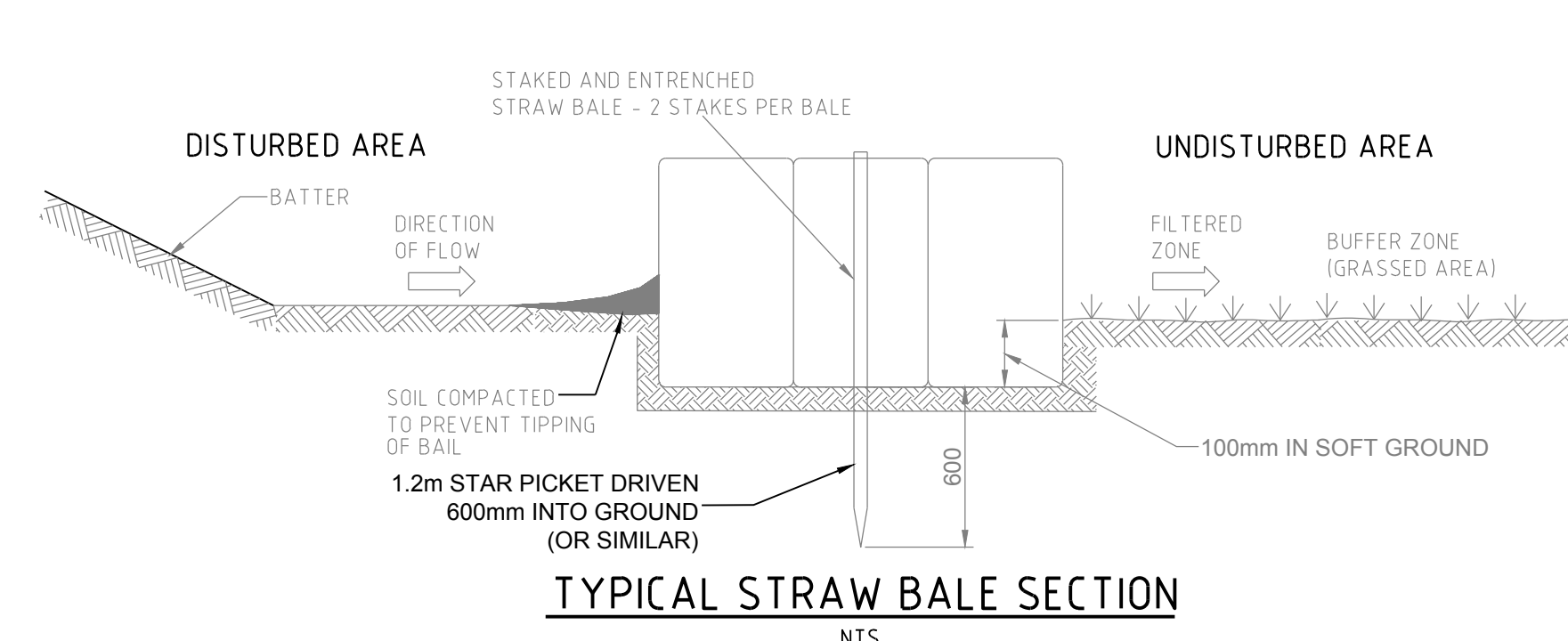


1. SLEEVES ARE TO BE MADE FROM GEOTEXTILE FABRIC LONGER THEN THE LENGTH OF THE INLET PIT.
2. FILL SLEEVE WITH 5 OR 10mm CLEAN GRAVEL.
3. PLACE THE SLEEVE AT THE OPENING OF THE KERB INLET LEAVING A 100mm GAP TO ACT AS AN EMERGENCY OVERFLOW.
4. SLEEVE MUST BE PLACED AGAINST THE KERB TO PREVENT BYPASS.
5. FIT SLEEVE TO ALL INLETS DOWNSTREAM OF THE WORKS.
6. FOR DRAINAGE WORKS FIT GEOTEXTILE FABRIC OR GEO BAGS TO UNDERSTAIN FACE OF ALL OPEN PIPES.
7. MAINTAIN AN OPENING AT THE TOP OF THE PIPE OF 1/3 OF THE PIPE DIAMETER.
8. THE FILTERS ARE TO BE CLEANED AND MAINTAINED DAILY.
9. ALL CARE SHOULD BE TAKEN TO MINIMIZE SEDIMENT REACHING THE STORMWATER SYSTEM BY MINIMIZING EXCAVATION WORKS AND PREVENTING EXCESS WATER FLOW THROUGH WORKS.



- DRAINAGE DRAIN NOTES -**

 1. CONSTRUCT WITH GRADIENT OF 1 PER CENT TO 5 PER CENT.
 2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE.
 3. DRAINS TO BE OF CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED.
 4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
 5. PERMANENT OR TEMPORARY STABILIZATION OF THE EARTH BANK TO BE COMPLETED WITHIN 10 DAYS OF CONSTRUCTION.
 6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO A SEDIMENT BASIN OR SIMILAR.
 7. DISCHARGE RUN OFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILIZED OR AN UNDISTURBED DISPOSAL SITE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED.
 8. COMPACT BANK WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
 9. EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDE NORMAL FLOW.

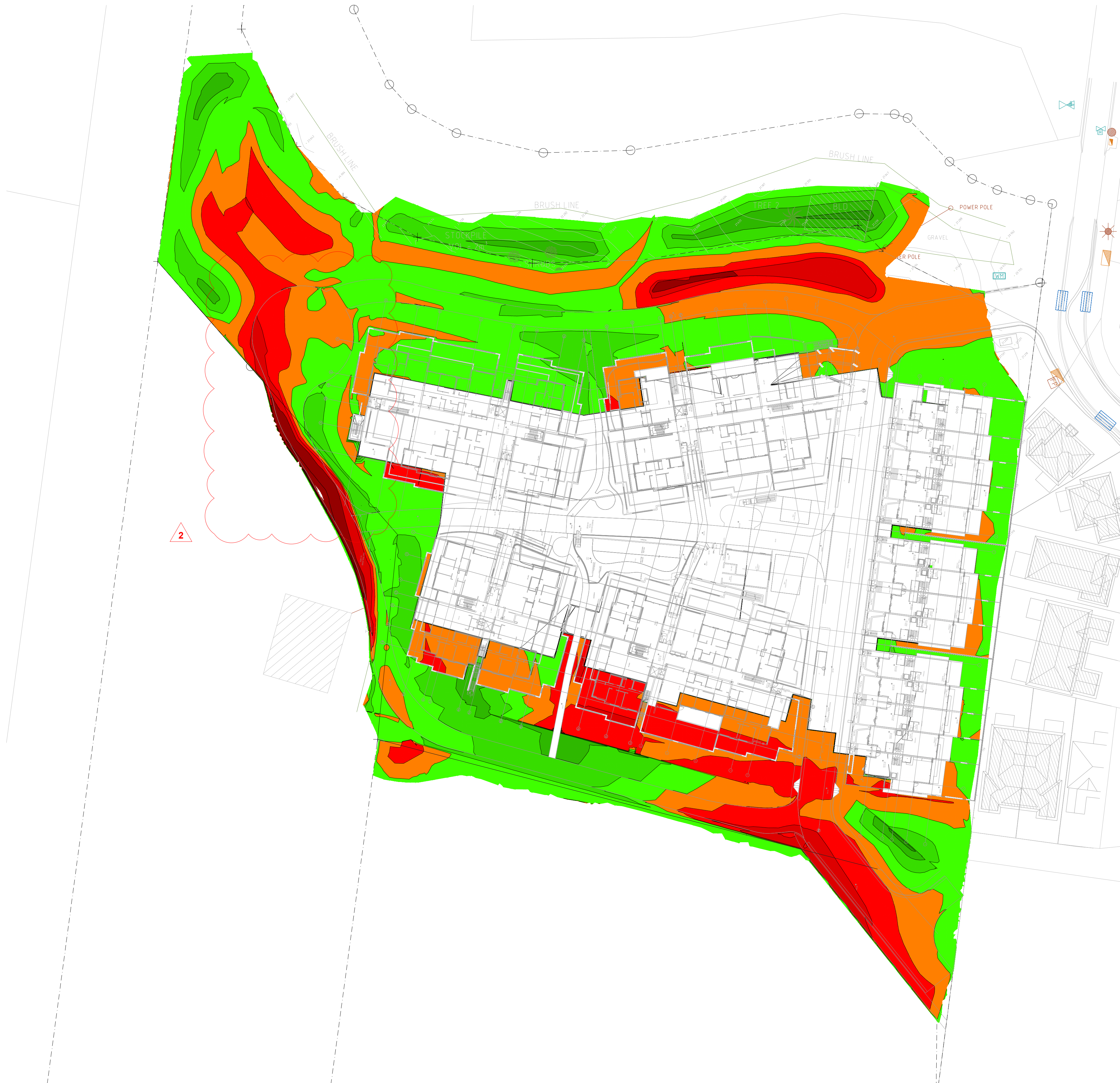


1. CONSTRUCT STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF A SLOPE.

PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING.
2. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS TO BE PLACED PARALLEL TO GROUND.
3. MAXIMUM HEIGHT OF FILTER IS ONE BALE.
4. ON SOFT MATERIALS, EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2 METRE STAR PICKETS. ANGLE THE FIRST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BAIL. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE BALES SHOULD BE LOCATED 1.5 TO 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.
6. WHERE REQUIRED WRAP GEOTEXTILE FILTER FABRIC AROUND BALES AND STAPLE IN POSITION.

[illegible]

Levels Table			
No.	From Depth	To Depth	Colour
1	-4.500	-3.000	Dark Red
2	-3.000	-2.000	Red
3	-2.000	-1.000	Red-Orange
4	-1.000	0.000	Orange
5	0.000	1.000	Light Green
6	1.000	2.000	Green
7	2.000	3.000	Dark Green
8	3.000	4.000	Very Dark Green



LEGEND	
	SITE BOUNDARY
	NATURAL SURFACE CONTOUR
	DEPTH CONTOUR

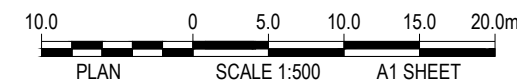
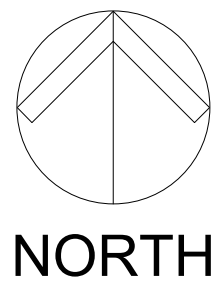
- NOTE:**
- VOLUMES ARE PRELIMINARY ONLY AND IS SUBJECT TO CHANGE. CONTRACTOR TO CONFIRM BULK EARTHWORKS VOLUMES AND LEVELS BASED ON THEIR OWN ASSUMPTIONS AND CALCULATIONS. THE FOLLOWING DEPTH PROFILES WERE ADOPTED FOR THE BULK EARTHWORKS. NOTE: ASSUMED LEVELS, SUBJECT TO CHANGE DURING DETAILED DESIGN STAGE.
 - ASPHALT PAVEMENT (TRAFFICABLE) = 290 mm
 - CONCRETE PAVEMENT (TRAFFICABLE) = 330mm
 - CONCRETE PAVEMENT (NON-TRAFFICABLE) = 275mm
 - CONCRETE FOOTPATH IN ROAD RESERVE = 175mm
 - CONCRETE STRUCTURAL SLABS = 200 mm
 - LANDSCAPING TOP SOIL = 100 mm
 - VOLUMES FROM PIPE TRENCH HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS.
 - A TOPSOIL REMOVAL OF 300mm HAS BEEN INCLUDED FOR THE OVERALL SITE.
 - BULKING FACTORS HAVE NOT BEEN INCLUDED.
 - ALLOW A +/-15% TOLERANCE FOR THESE VOLUMES.
 - EXTENT OF VERTICAL CUTS IN ROCK TO BE CONFIRMED ON SITE BY CONTRACTOR AND GEOTECHNICAL ENGINEER.
 - EXTENT OF CUTTING/FILLING IN THE VICINITY OF EXISTING TREES SHALL BE CONFIRMED BY THE PROJECT ARBORIST.
 - TREE PROTECTION ZONES TO BE CONFIRMED BY THE PROJECT ARBORIST.
 - ALLOW A +/-15% TOLERANCE FOR THESE VOLUMES.

CUT	6,200 m³
FILL	6,000 m³
NET	200 m³ EXPORT

Proj: X:7368002_Tp_A1-A4_X:7368002_S1_Easting_Survey_X:7368000_A0_Site_Plan_RWG_DWG
Rev Date: 05/12/2023 15:45:24 Logon Name: blawert Cad File: T:\7368002\Drawings\A1-A4\DWG\A1-A4-0501 Bulk Earthworks Levels Plan.dwg

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2	RE-ISSUE FOR \$4.56	05/12/23			

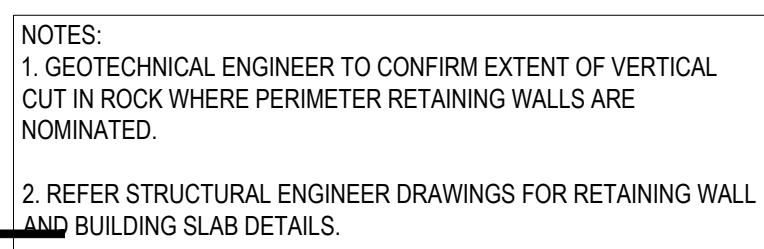
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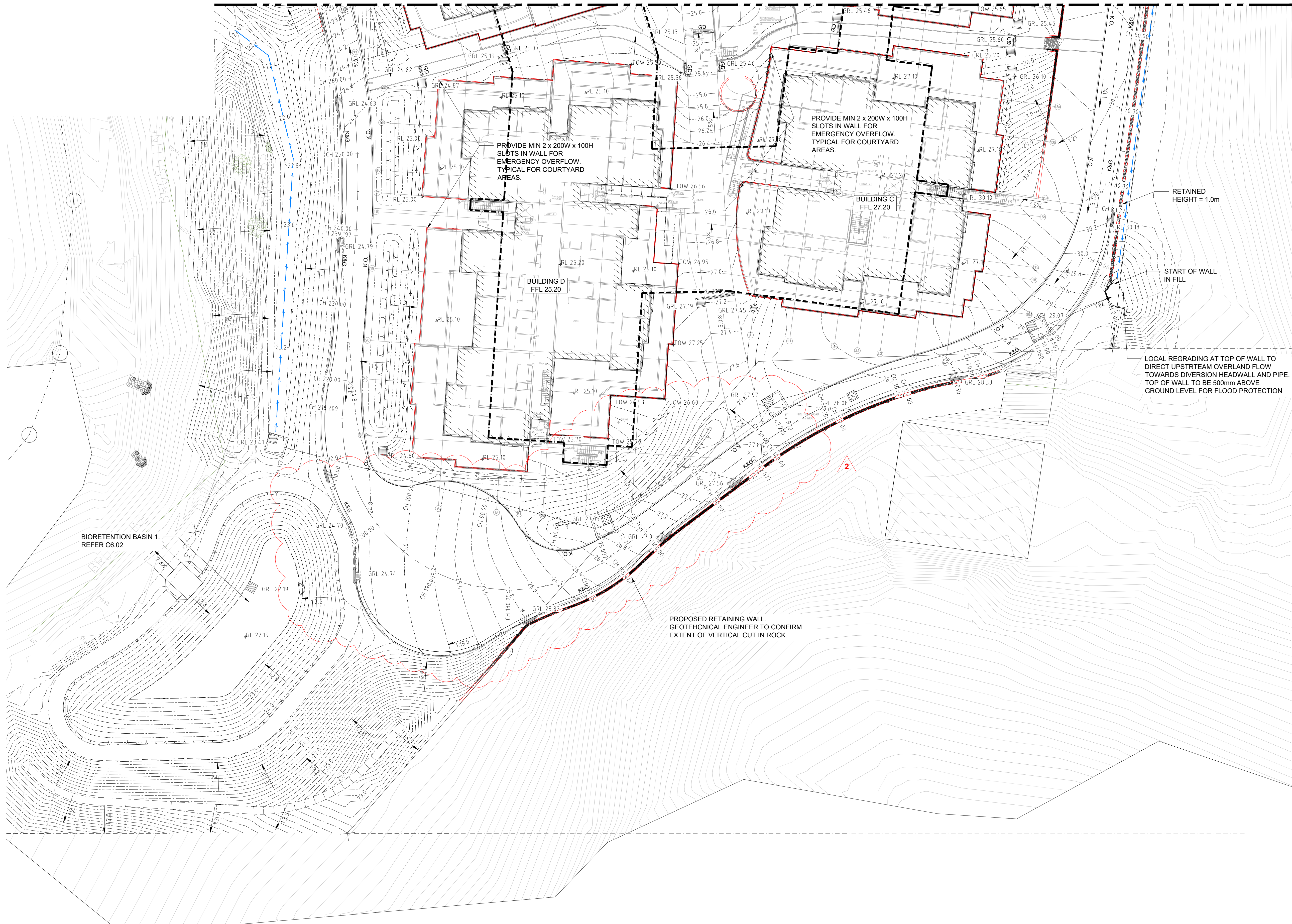
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TITLE					
BULK EARTHWORKS LEVELS PLAN					
SCALE AS SHOWN	DRAWN I.K.	DESIGNED I.O.	CHECKED J.G.	APPROVED J.G.	
JOB No. 7368002		DRAWING No. C3.01		ISSUE 2	
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TITLE				
GENERAL ARRANGEMENT PLAN-SHEET 1				
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
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SEPTEMBER 2023			ISSUE FOR \$4.56	

REFER C4.01 FOR CONTINUATION



LEGEND

- EXISTING BOUNDARY
- - - MAJOR SURFACE CONTOUR
- - - MINOR SURFACE CONTOUR
- - - EXISTING SURFACE CONTOUR
- ▲ TOP OF BATTER
- ▲ BOTTOM OF BATTER
- V.C. VEHICULAR CROSSING (V.C.)
- K&G KERB & GUTTER (K&G)
- K.O. KERB ONLY (K.O.)
- Kerb Inlet Pit (on grade)
- Grated Inlet Pit
- RL 91.86 FINISHED SURFACE LEVEL
- GRL 91.86 FINISHED STORMWATER PIT LID/GRATE LEVEL
- TOW 84.20 BOW 84.00 TOP OF WALL LEVEL
- 2.5% GRADE ARROW
- Retaining Wall
- Basement Line
- Upstream Diversion Swale
- Swale Flow Arrow

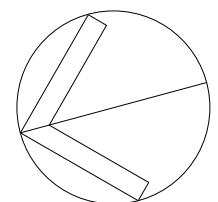
NOTES:
1. GEOTECHNICAL ENGINEER TO CONFIRM EXTENT OF VERTICAL CUT IN ROCK WHERE PERIMETER RETAINING WALLS ARE NOMINATED.
2. REFER STRUCTURAL ENGINEER DRAWINGS FOR RETAINING WALL AND BUILDING SLAB DETAILS.

LOCAL REGRADING AT TOP OF WALL TO DIRECT UPSTREAM OVERLAND FLOW TOWARDS DIVERSION HEADWALL AND PIPE. TOP OF WALL TO BE 500mm ABOVE GROUND LEVEL FOR FLOOD PROTECTION

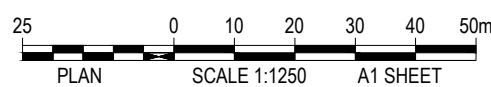
PROPOSED RETAINING WALL. GEOTECHNICAL ENGINEER TO CONFIRM EXTENT OF VERTICAL CUT IN ROCK.

BIORETENTION BASIN 1. REFER C6.02

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NORTH



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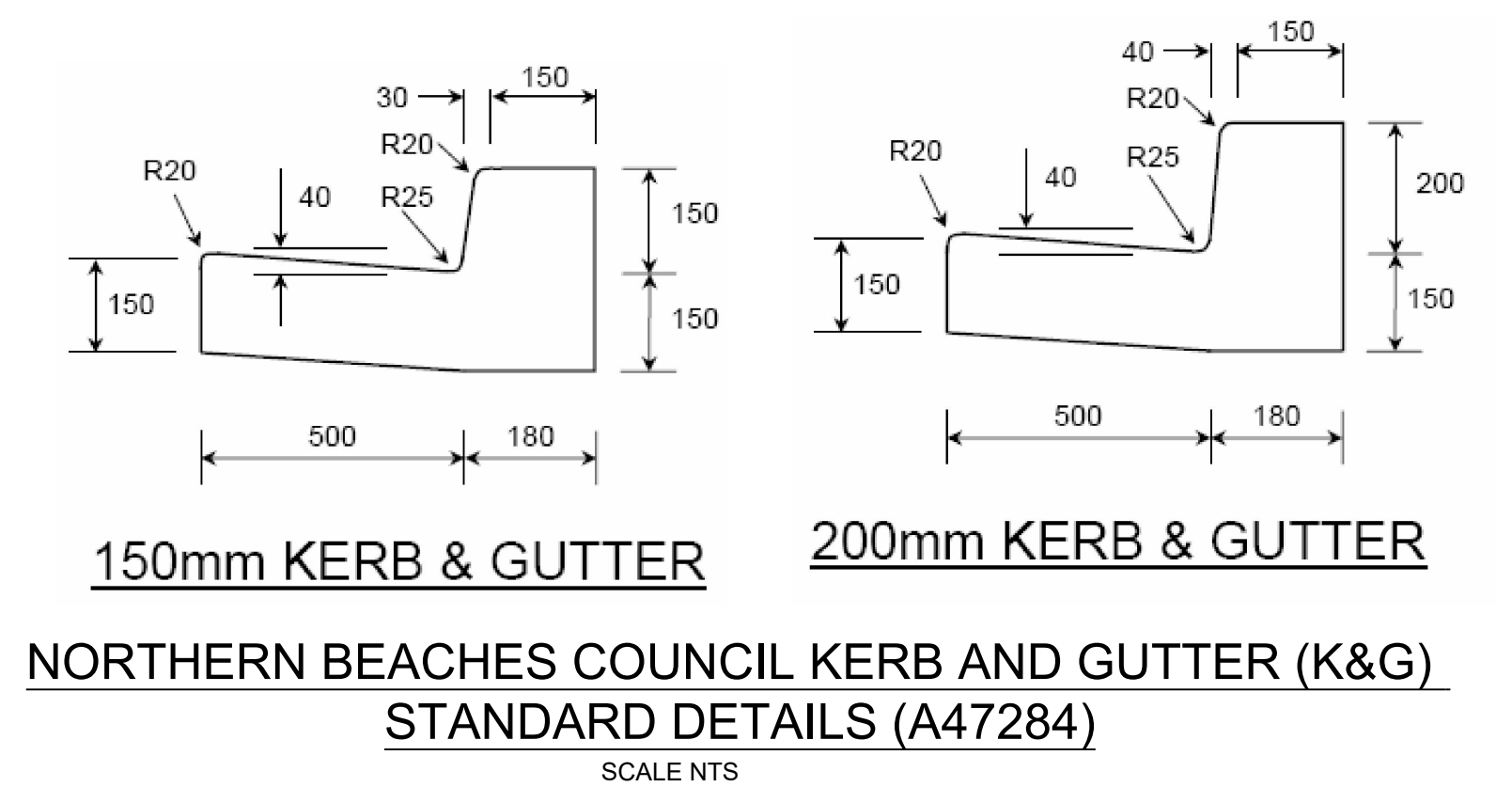
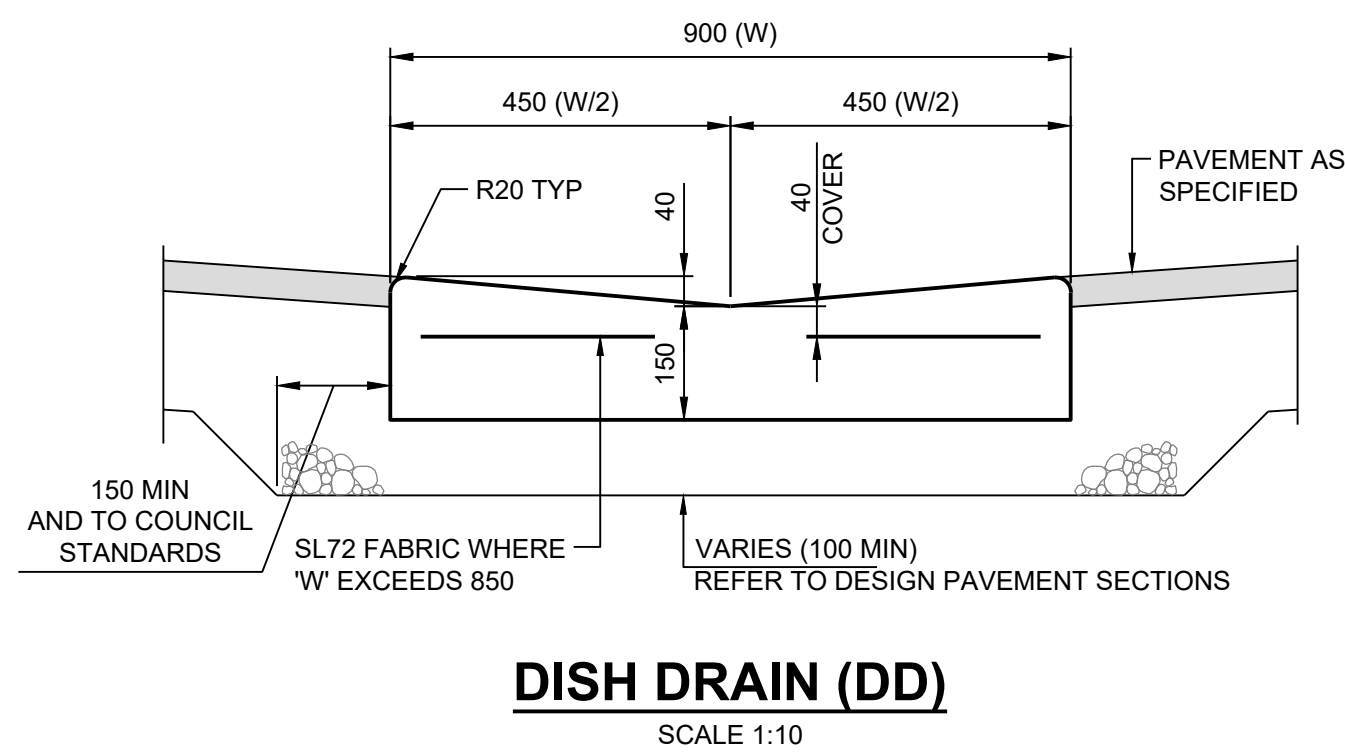
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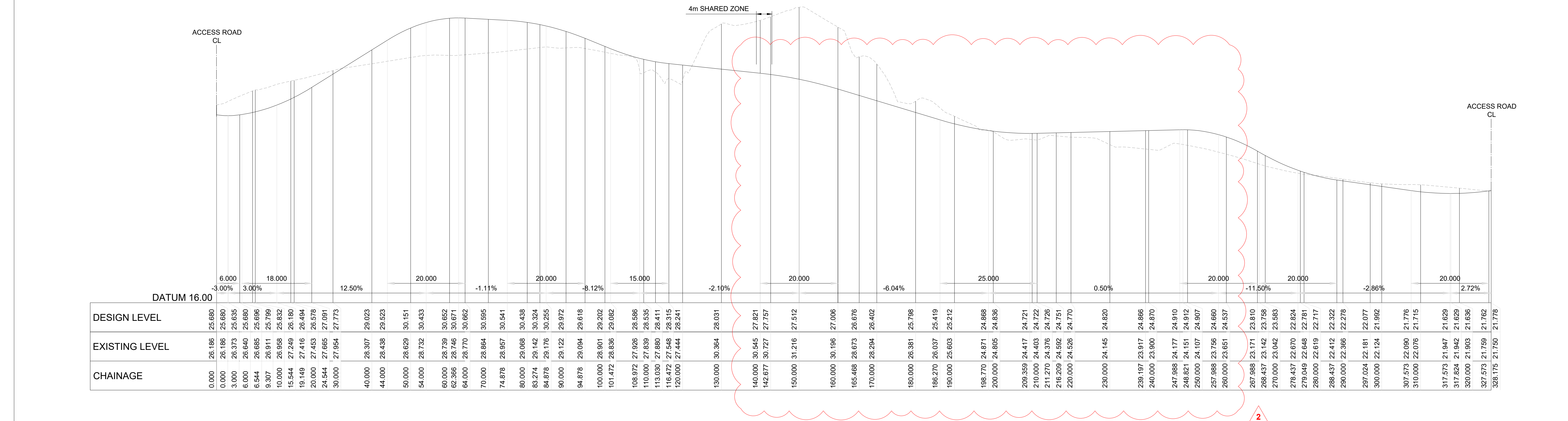
TITLE					
GENERAL ARRANGEMENT PLAN-SHEET 2					
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED	
AS SHOWN	I.K.	I.O.	J.G.	J.G.	
JOB No.	DRAWING No.	ISSUE			
7368002	C4.02	2			
DATE	STATUS				
SEPTEMBER 2023	ISSUE FOR \$4.56				

Path: X:\7368002_TB_A1\X_7368002_S1_Engine_Survey_7368002\WSCE_CS_M001_Engine_Survey_X_7368002_TB_A1_Plan_PNG.ROAD_7368002\WSCE_CS_M001_Design_Surface.PNG.ROAD_7368002_S1 Layout
Plot Date: 05.12.2023@16:15:45 Login Name: bslawert C&F File: 7368002\Drawings\AutoCAD\Design\City 2023\185\General Arrangement Plan Sheet 1.dwg



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		1	ISSUE FOR \$4.56	03/11/23							SITeworks DETAILS

\\fs1\X\7368002_Tp_A1_H\7368002\WSP\CS\MO_03_Prop_Surfaces_RING ROAD
Plot Date: 05/12/2023@16:23:33 Logon Name: slawert
C:\p1\7368002\Drawings\AutoCAD\Civil\Design\Civil 2014\S4.56\CS.11\Road Long Sections.dwg



RING ROAD LONGITUDINAL SECTION
HORIZONTAL SCALE 1:250
VERTICAL SCALE 1:50

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PLAN SCALE 1:500 A1 SHEET

REVISION	AMENDMENT	DATE	REVISION	AMENDMENT	DATE
1	ISSUE FOR S4.56	03/11/23			
2	RE-ISSUE FOR S4.56	05/12/23			

CLIENT

KLIATRO

PROJECT

FOREST LODGE WARRIWOOD

PREPARED BY

WSce Pty Ltd
ACN 648 655 141
ABN 75 648 655 141
info@wsce.com.au
wsce.com.au

GCC
ISO 9001 Certified

WSce

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TITLE				
ROAD LONG SECTIONS - RING ROAD				
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
AS SHOWN	I.K.	I.O.	J.G.	J.G.
JOB No.	DRAWING No.		ISSUE	
7368002	C5.12		2	
DATE	STATUS			
SEPTEMBER 2023	ISSUE FOR S4.56			

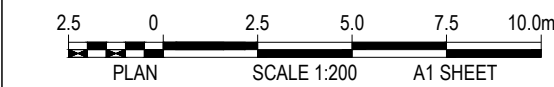
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SHEET SIZE: A1

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Plot Date: 03.11.2023@15:38:08
Log In Name: slawert

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REVISION	AMENDMENT	DATE	REVISION	AMENDMENT	DATE
1	ISSUE FOR \$4.56	03/11/23			

KLATRO

FOREST LODGE
WARRIEWOOD

PREPARED BY

WSce Pty Ltd
ACN 668 655 161
ABN 75 668 655 161
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WSce

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TITLE								
ROAD CROSS SECTIONS - ACCESS ROAD								
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED				
AS SHOWN	I.K.	I.O.	J.G.	J.G.	J.G.			
JOB No.	DRAWING No.		ISSUE					
7368002	C5.21		1					
DATE	STATUS							
SEPTEMBER 2023	ISSUE FOR \$4.56							

DESIGN LEVEL	22.017	21.227	21.081	21.186	21.081	21.236	21.259
EXISTING LEVEL	21.724	21.606	21.528	21.395	21.350	21.316	21.346
OFFSET	-8.000	-5.650	-3.500	0.000	3.500	5.838	6.435

CHAINAGE 20.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	22.020	22.146	21.493	21.347	21.452	21.347	21.454	21.466
EXISTING LEVEL	22.035	22.033	21.649	21.688	21.719	21.711	21.728	21.737
OFFSET	-8.000	-7.662	-5.650	-3.500	0.000	3.500	5.827	7.854

CHAINAGE 30.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	22.100	22.100	23.040	22.893	22.998	22.893	23.100
EXISTING LEVEL	18.700	18.700	18.699	18.699	19.162	19.317	19.590
OFFSET	-8.000	-7.879	-5.650	-3.500	0.000	3.500	5.650

CHAINAGE 60.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	22.842	23.274	23.126	23.231	23.126	23.274	23.100	23.100
EXISTING LEVEL	18.950	18.949	18.948	18.947	18.946	19.906	19.885	19.885
OFFSET	-8.000	-5.650	-3.500	0.000	3.500	5.650	7.930	8.000

CHAINAGE 70.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	22.800	22.800	23.934	23.787	23.892	23.787	23.934	23.903
EXISTING LEVEL	19.700	19.700	19.700	19.697	19.699	20.820	20.820	20.820
OFFSET	-8.000	-7.687	-5.650	-3.500	0.000	3.500	5.650	7.733

CHAINAGE 100.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	24.086	24.150	24.154	24.006	24.111	24.006	24.154	24.600
EXISTING LEVEL	19.948	19.949	19.950	19.950	19.949	19.948	21.188	21.189
OFFSET	-8.000	-7.656	-5.650	-3.500	0.000	3.500	5.650	7.793

CHAINAGE 110.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	24.305	24.343	24.375	24.227	24.332	24.227	24.375	24.491
EXISTING LEVEL	20.059	20.057	20.045	20.058	20.175	20.608	20.875	21.166
OFFSET	-8.000	-7.803	-5.650	-3.500	0.000	3.500	5.650	8.000

CHAINAGE 120.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	24.600	24.600	24.660	24.513	24.618	24.513	24.660	24.600
EXISTING LEVEL	20.303	20.306	20.345	20.345	25.156	25.244	25.316	25.433
OFFSET	-8.000	-7.838	-5.650	-3.500	0.000	3.500	5.650	8.000

CHAINAGE 130.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	23.265	23.436	23.495	23.347	23.452	23.347	23.495	23.570
EXISTING LEVEL	19.200	19.200	19.199	19.199	19.197	19.196	20.019	20.019
OFFSET	-8.000	-7.657	-5.650	-3.500	0.000	3.500	5.650	8.000

CHAINAGE 80.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	22.800	22.800	23.713	23.567	23.672	23.567	23.638	23.662
EXISTING LEVEL	19.450	19.450	19.450	19.449	19.448	19.447	20.420	20.420
OFFSET	-8.000	-7.701	-5.650	-3.500	0.000	3.500	5.634	7.788

CHAINAGE 90.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	22.200	21.890	21.742	21.847	21.734	21.691	21.799	21.794
EXISTING LEVEL	22.131	22.170	22.208	22.255	21.804	21.848	21.891	21.901
OFFSET	-8.000	-5.650	-3.500	0.000	3.388	5.475	7.499	8.000

CHAINAGE 40.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	22.100	22.528	22.382	22.487	22.382	22.526	23.104	23.106
EXISTING LEVEL	22.240	22.300	22.358	19.200	19.200	19.200	19.200	19.200
OFFSET	-8.000	-5.650	-3.500	0.000	3.500	5.735	7.745	8.000

CHAINAGE 50.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	24.600	25.132	25.089	25.015	25.059	24.948	24.872
EXISTING LEVEL	25.695	25.754	26.350	26.431	26.511	26.573	26.598
OFFSET	-8.000	-5.650	0.000	2.484	4.908	6.924	8.000

CHAINAGE 140.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	26.258	26.197	25.937	25.789	25.894	25.752	25.678	25.904	25.908
EXISTING LEVEL	25.940	25.947	25.988	26.451	27.213	27.758	27.785	27.844	27.874
OFFSET	-8.000	-7.652	-5.650	-3.500	0.000	3.494	5.533	7.763	8.000

CHAINAGE 150.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	27.654	27.071	26.923	27.028	26.923	27.071	30.074
EXISTING LEVEL	27.362	28.092	28.390	28.881	29.469	30.004	30.111
OFFSET	-8.000	-5.650	-3.500	0.000	3.500	5.650	6.071

CHAINAGE 160.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	28.810	28.803	28.327	28.174	28.278	28.173	28.320	30.989
EXISTING LEVEL	28.673	28.679	29.049	29.383	29.947	30.458	30.832	30.907
OFFSET	-8.000	-7.965	-5.653	-3.502	0.000	3.500	5.650	6.042

CHAINAGE 170.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	29.000	29.097	29.269	29.431	29.527	29.422	29.570	31.705
EXISTING LEVEL	29.346	29.508	29.844	30.272	30.634	31.236	31.654	31.713
OFFSET	-8.000	-7.002	-4.934	-2.264	0.000	3.500	5.650	5.966

CHAINAGE 180.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	29.908	30.367	30.597	30.725	30.620	30.768	32.624	33.178
EXISTING LEVEL	29.934	30.315	30.664	31.291	31.967	32.537	32.624	33.178
OFFSET	-8.000	-5.726	-3.575	0.000	3.500	5.650	5.963	8.000

CHAINAGE 190.00
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200

DESIGN LEVEL	30.976	31.039	31.121	31.050	31.165	33.325
EXISTING LEVEL	30.934	31.187	31.785	32.428	33.239	33.338
OFFSET	-8.000	-3.972	-2.660	0.000	5.587	5.970

CHAINAGE 195.44
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:200



SWALE TYPE 2
DEPTH = 0.125m
TOP WIDTH = 1.0m

PROVIDE MIN 2 x 200W x 100H
SLOTS IN WALL FOR
EMERGENCY OVERFLOW.
TYPICAL FOR COURTYARD
AREAS.

COURTYARD DRAINAGE
CONNECTION BY HYDRAULIC
ENGINEER

225Ø STORMWATER PIPE
CROSSES DIVERSION PIPE
AT APPROX 300 CLEARANCE

300Ø STORMWATER PIPE
CROSSES DIVERSION PIPE
AT APPROX 300 CLEARANCE

150Ø STORMWATER PIPE
CROSSES DIVERSION PIPE
AT APPROX 550 CLEARANCE

PROPOSE 1500 DIVERSION PIPE TO
REDIRECT 100 YR LOCAL UPSTREAM
FLOOD WATER AROUND THE SITE

TOP OF WALL TO BE RL30.80
FOR FLOOD PROTECTION.

KOPPERS LOGS (Ø150MM, 500MM SPACING)

PROVIDE FENCE
AROUND TOP OF BASIN.

CONNECTION COURTYARD
DRAINAGE BY HYDRAULIC
ENGINEER

SURCHARGE PIT TO
DIRECT FLOW TO
ADJACENT SWALE

PROVIDE MIN 2 x 200W x 100H
SLOTS IN WALL FOR
EMERGENCY OVERFLOW.
TYPICAL FOR COURTYARD
AREAS.

225Ø STORMWATER PIPE
CROSSES DIVERSION PIPE
AT APPROX 750 CLEARANCE

	EXISTING BOUNDARY
	EXISTING STORMWATER PIPE
	EXISTING STORMWATER PIPE TO BE REMOVED
	INDICATIVE OVERLAND FLOW ROUTE
	PIPE DIAMETER AND DIRECTION OF FLOW
	STORMWATER PIPE (SIZE < Ø1050)
	STORMWATER PIPE (SIZE > Ø1050)
	KERB DRAIN
	KERB INLET PIT (SAG) (900 x 450 GRATE WITH 1.8m WIDE LINTEL)
	GRATED INLET PIT
	PIT STRUCTURE NUMBER
	STORMWATER LINE NUMBER
	SWALE FLOW ARROW
	UPDRAIN DIVERSION SWALE FLOW ARROW
	DRAINAGE BY OTHERS REFER HYDRAULIC ENGINEER DRAWINGS

1. STORMWATER DRAINAGE ASSOCIATED WITH ALL SUSPENDED AREAS AND COURTYARDS ARE TO BE UNDERTAKEN BY THE HYDRAULIC ENGINEER.
2. COORDINATION WITH THE HYDRAULIC ENGINEER IS REQUIRED.

TITLE				
STORMWATER LAYOUT PLAN-SHEET 2				
SCALE	AS SHOWN	DRAWN	I.K.	DESIGNED I.O. CHECKED J.G. APPROVED J.G.
JOB No.	7368002		DRAWING No.	C6.02
				ISSUE
				2
DATE	SEPTEMBER 2023	STATUS		
		ISSUE FOR \$4.56		

Xref: X:\7368002_Tp_Ar.dwg
 Plot Date: 05.12.2023@16:42:23
 User Name: isawant
 Cadd File: T:\7368002\Drawings\AutoCAD\Civil\Design\Civil 2014-150x0.05 Stormwater Pit Schedule.dwg

NAME	SURFACE ELEV. (m)	PIT DEPTH (m)	PIT SIZE AND TYPE	FROM	TO	LENGTH (m)	U/S IL (m)	D/S IL (m)	SLOPE (%)	PIPE TYPE	DIA (mm)	No. PIPES
Pit 1/1	24.41	0.67	900SQ PIT WITH CLASS B GRATE	Pit 1/1	Pit 2/1	13.2	23.74	23.61	0.98	uPVC	225	1
Pit 2/1	24.5	1.73	900SQ PIT WITH CLASS B GRATE	Pit 2/1	Pit 3/1	17.8	22.77	22.59	1.01	uPVC	225	1
Pit 3/1	23.48	1.49	900SQ PIT WITH CLASS B GRATE	Pit 3/1	Pit 4/1	12.4	21.99	21.87	0.97	uPVC	225	1
Pit 4/1	22.69	0.87	600SQ PIT WITH CLASS B GRATE	Pit 4/1	Pit 5/1	12	21.82	21.7	1.00	uPVC	300	1
Pit 5/1	22.64	1.43	900SQ PIT WITH CLASS B GRATE	Pit 5/1	Pit 6/1	18.2	21.21	21.03	0.99	uPVC	300	1
Pit 6/1	21.97	0.99	600SQ PIT WITH CLASS B GRATE	Pit 6/1	Pit 7/1	13.7	20.98	20.84	1.02	uPVC	300	1
Pit 7/1	21.9	1.11	600SQ PIT WITH CLASS B GRATE	Pit 7/1	Pit 8/1	11.9	20.79	20.67	1.01	uPVC	300	1
Pit 8/1	22.09	1.47	900SQ PIT WITH CLASS B COVER	Pit 8/1	Pit 9/1	17.5	20.62	20.45	0.97	uPVC	300	1
Pit 9/1	21.31	1.01	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 9/1	Pit 10/1	7.1	20.3	20.26	0.56	RCP	375	2
Pit 10/1	21.33	1.09	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 10/1	Basin 2	7.2	20.24	20.2	0.56	RCP	375	2
Basin 2	21.4		OSD BASIN 2	Basin 2	HW4	28.2	19.25	18	4.43	uPVC	300	1
Pit 13/1	21.49	1.00	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 13/1	Basin 2	2.9	20.49	20.2	10	uPVC	225	1
Pit 1/2	25.80	1.27	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 1/2	Pit 2/2	9.6	24.53	24.01	5.42	uPVC	225	1
Pit 2/2	24.85	0.75	900SQ PIT WITH CLASS B GRATE	Pit 2/2	Pit 3/2	4.2	24.1	24.05	1.19	uPVC	225	1
Pit 3/2	24.86	0.96	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 3/2	Pit 4/2	7	23.9	23.83	1.00	uPVC	225	1
Pit 4/2	24.85	1.12	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 4/2	Pit 5/2	44.7	23.73	22.76	2.17	uPVC	225	1
Pit 5/2	23.61	1.01	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 5/2	Pit 6/2	15.4	22.6	22.19	2.66	uPVC	300	1
Pit 6/2	23.24	1.07	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 6/2	Pit 7/2	32	22.17	20.94	3.84	uPVC	300	2
Pit 7/2	21.85	0.97	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 7/2	Pit 9/1	7.7	20.88	20.4	6.23	uPVC	300	2
Pit 1/3	23.6	0.90	18m LENGTH ACO TRENCH DRAIN WITH CLASS D GRATE	Pit 1/3	Pit 5/2	7.4	22.7	22.62	1.08	uPVC	150	2
Pit 2/4	23.66	0.90	3.8m LENGTH ACO TRENCH DRAIN WITH CLASS D GRATE	Pit 2/4	Pit 4/4	10.7	22.76	22.34	3.93	uPVC	150	2
Pit 4/4	23.25	0.91	7.2m LENGTH ACO TRENCH DRAIN WITH CLASS D GRATE	Pit 4/4	Pit 6/2	7.4	22.34	22.26	1.08	uPVC	150	2
Pit 1/5	21.85	0.91	900SQ PIT WITH CLASS D GRATE	Pit 1/5	Pit 7/2	7	20.94	20.9	0.57	uPVC	300	2
Pit 1/6	26.1	1.10	900SQ PIT WITH CLASS B GRATE	Pit 1/6	Pit 2/6	1.8	25	24.85	8.33	uPVC	225	1
Pit 2/6	25.7	1.00	900SQ PIT WITH CLASS B GRATE	Pit 2/6	Pit 3/6	22.5	24.7	24.5	0.89	uPVC	225	1
Pit 3/6	25.46	1.01	900SQ PIT WITH 600 x 900 CLASS B SINGLE GRATE WITH 1.2m LENGTH ACO TRENCH DRAIN	Pit 3/6	Pit 4/6	18.8	24.45	24.27	0.96	uPVC	225	1
Pit 4/6	25.13	1.48	900SQ PIT WITH CLASS B GRATE WITH 2.8m LENGTH ACO TRENCH DRAIN	Pit 4/6	Pit 5/6	23.8	23.65	23.53	0.5	uPVC	300	1
Pit 5/6	25.19	1.69	900SQ PIT WITH 600 x 900 CLASS B SINGLE GRATE WITH 1.2m LENGTH ACO TRENCH DRAIN	Pit 5/6	Pit 6/6	10.2	23.5	23.44	0.59	uPVC	300	1
Pit 6/6	24.87	1.46	900SQ PIT WITH 600 x 900 CLASS B SINGLE GRATE WITH 1.2m LENGTH ACO TRENCH DRAIN	Pit 6/6	Pit 7/6	10.5	23.41	23.35	0.57	uPVC	300	1
Pit 7/6	24.63	1.31	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 7/6	Pit 8/6	17.8	23.32	23.23	0.51	uPVC	300	1
Pit 8/6	24.79	1.59	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 8/6	Pit 8/7	36.3	23.2	23.01	0.52	uPVC	300	1
Pit 1/7	30.18	0.85	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 1/7	Pit 2/7	28.1	29.33	27.47	6.37	uPVC	225	1
Pit 2/7	28.33	0.91	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 2/7	Pit 3/7	12.7	27.42	27.23	1.5	uPVC	225	1
Pit 3/7	28.08	0.90	900SQ PIT WITH CLASS D COVER	Pit 3/7	Pit 4/7	18.7	27.18	26.75	2.3	uPVC	225	1
Pit 4/7	27.56	1.51	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 4/7	Pit 5/7	10.9	26.05	25.94	1.01	uPVC	225	1
Pit 5/7	27.01	1.10	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 5/7	Pit 6/7	20	25.91	24.99	4.62	uPVC	225	1
Pit 6/7	25.82	0.92	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 6/7	Pit 7/7	22.4	24.9	23.4	6.1	uPVC	300	1
Pit 7/7	24.74	1.84	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 7/7	Basin 1	6.5	22.9	22.43	6.79	RCP	375	1
Pit 8/7	24.61	1.59	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 8/7	Pit 7/7	8.1	23.02	22.95	6.79	uPVC	300	1
Basin 1	24.3	2.81	OSD BASIN 1	Basin 1	HW5	21.1	21.49	21.00	1.84	uPVC	150	1
Pit 1/8	28.62	1.55	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit1/8	Pit2/8	24.3	27.07	24.64	10	uPVC	225	1
Pit 2/8	25.49	0.88	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit2/8	Pit 1/2	4.8	24.61	24.56	1.04	uPVC	225	1
Pit 3/8	26.14	0.89	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 3/8	Pit2/8	7.2	25.25	24.64	8.47	uPVC	225	1
Pit 1/9	22.99	0.96	900SQ PIT WITH CLASS B GRATE	Pit 1/9	Pit 2/9	8.7	22.03	21.7	3.79	uPVC	300	1
Pit 2/9	22.63	2.13	900SQ PIT WITH 600 x 900 CLASS D SINGLE GRATE WITH 1.8m LINTEL OPENING	Pit 2/9	Basin 2	3	20.5	20.2	10	uPVC	300	1
Pit 1/11	25.46	0.71	900SQ PIT WITH CLASS B GRATE	Pit 1/11	Pit 2/6	2.9	24.75	24.72	1.03	uPVC	225	1
Pit 1/12	23.05	0.95	900SQ PIT WITH CLASS B GRATE	Pit 1/12	Pit 1/9	3.7	22.1	22.06	1.08	uPVC	225	1
Pit 1/14	27.45	1.15	600SQ PIT WITH CLASS B GRATE	Pit 1/14	Pit 2/14	6.4	26.3	26.25	0.78	uPVC	225	1
Pit 2/14	27.19	0.97	900SQ PIT WITH CLASS B GRATE & 3.8m LENGTH ACO TRENCH DRAIN	Pit 2/14	Pit 4/7	23.5	26.22	26.1	0.51	uPVC	225	1
Pit 1/15	24.62	0.95	900SQ PIT WITH CLASS B COVER	Pit 1/15	Pit 8/7	7.1	23.67	23.05	6.73	uPVC	150	1
HW1/SD	31.36	1.91	HEADWALL	HW1/SD	Pit 1/SD	9	29.45	27.28	24.11	RCP	1500	1
Pit 1/SD	29.07	2.72	2250 SQ PIT WITH 900SQ CLASS D GRATE	Pit 1/SD	Pit 2/SD	42	26.35	23.35	7.14	RCP	1500	1
Pit 2/SD	27.16	3.86	2250 SQ PIT WITH 900SQ CLASS B GRATE	Pit 2/SD	Pit 3/SD	23.4	23.3	22.95	1.5	RCP	1500	1
Pit 3/SD	25.57	2.67	2250 SQ PIT WITH 900SQ CLASS B COVER	Pit 3/SD	Pit 4/SD	36.9	22.9	20.77	5.77	RCP	1500	1

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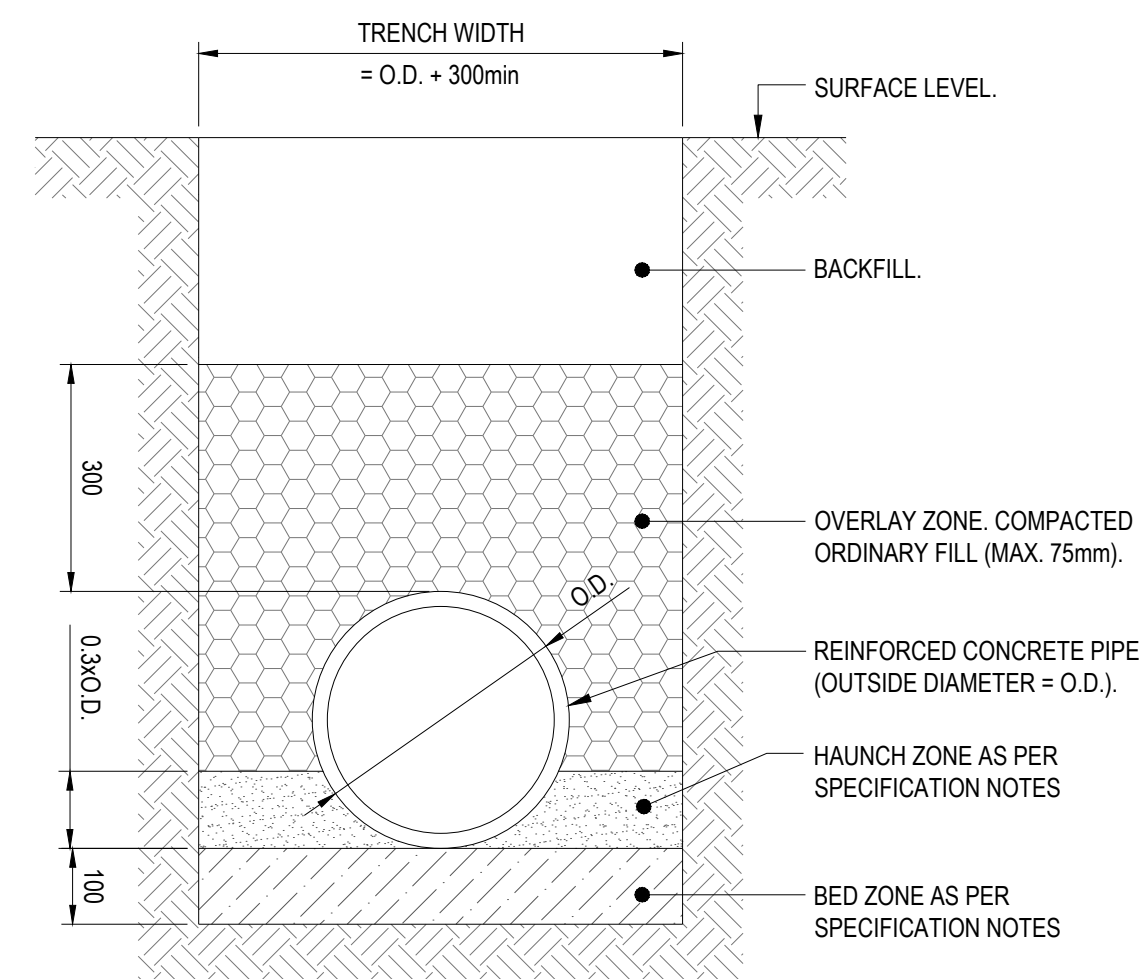
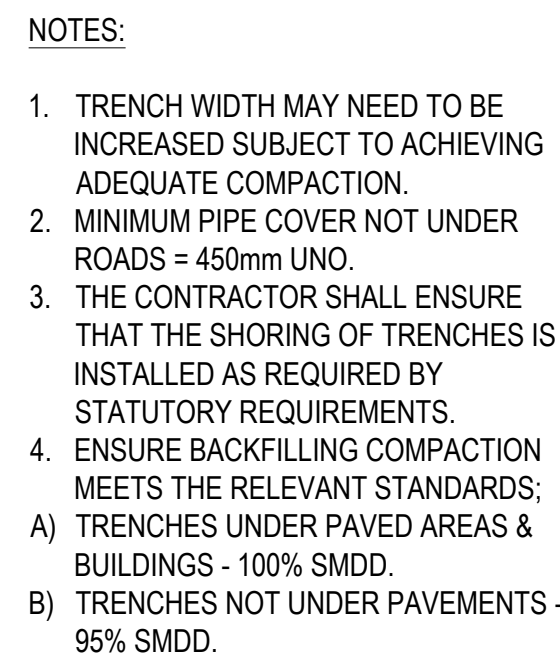
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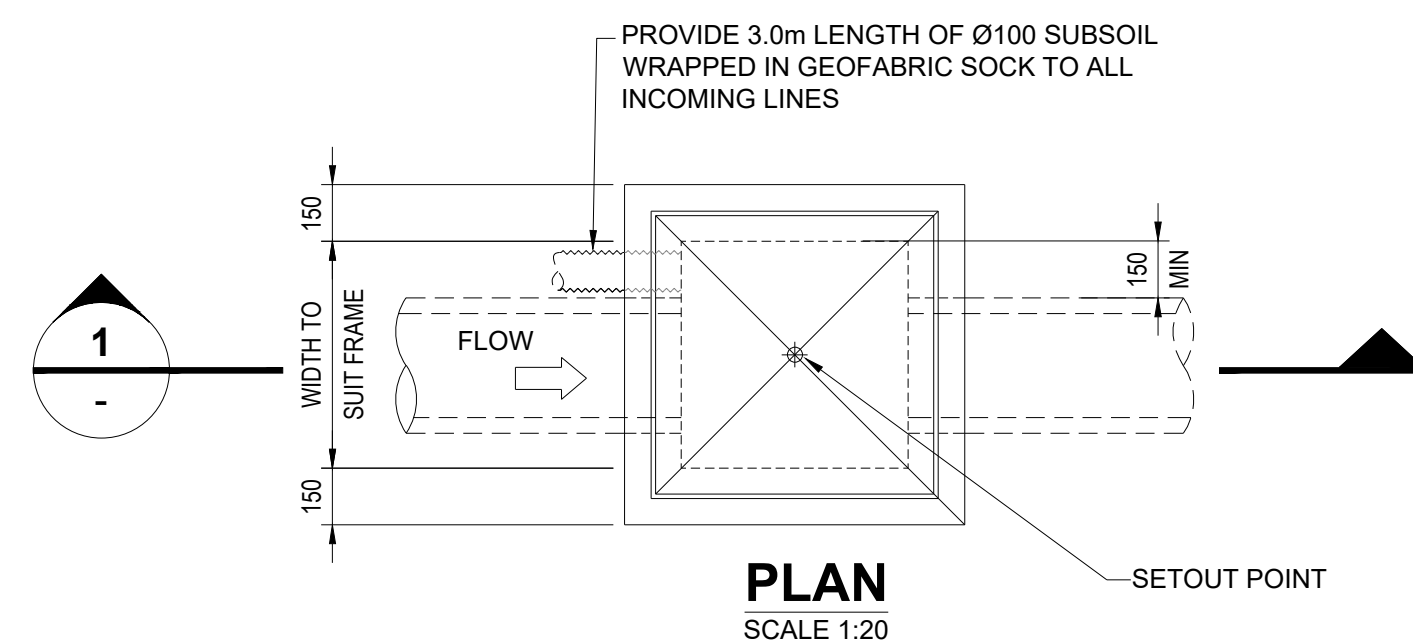
 STORMWATER PIT SCHEDULE

SCALE AS SHOWN	DRAWN I.K.	DESIGNED I.O.	CHECKED J.G.	APPROVED J.G.
JOB No. 7368002	DRAWING No. C6.04		ISSUE 2	
DATE SEPTEMBER 2023		STATUS ISSUE FOR \$4.56		



NOTES:

1. TRENCH WIDTH MAY NEED TO BE INCREASED SUBJECT TO ACHIEVING ADEQUATE COMPACTION.
2. MINIMUM PIPE COVER NOT UNDER ROADS = 450mm UNO.
MINIMUM PIPE COVER UNDER ROADS = 600mm UNO.
3. THE CONTRACTOR SHALL ENSURE THAT THE SHORING OF TRENCHES IS INSTALLED AS REQUIRED BY STATUTORY REQUIREMENTS.
4. ENSURE BACKFILLING COMPACTION MEETS THE FOLLOWING STANDARDS:
 - A) TRENCHES UNDER PAVED AREAS & BUILDINGS - 100% SMDD.
 - B) TRENCHES NOT UNDER PAVEMENTS - 90% SMDD.

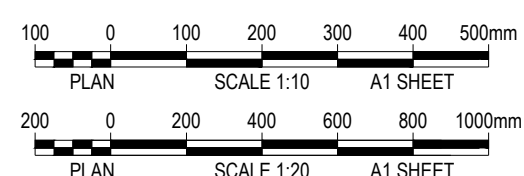


600 - 900SQ SURFACE INLET PITS

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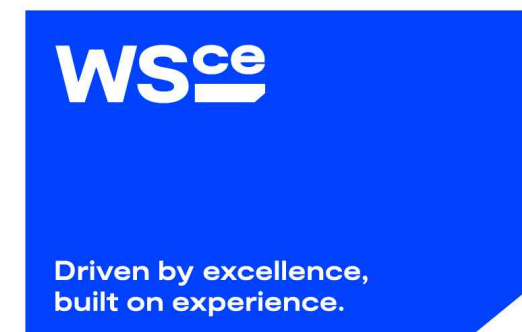
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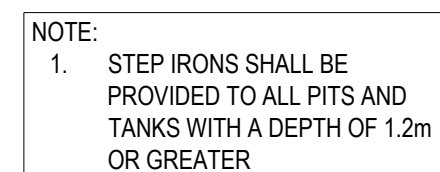
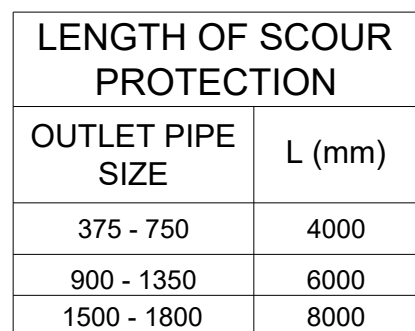
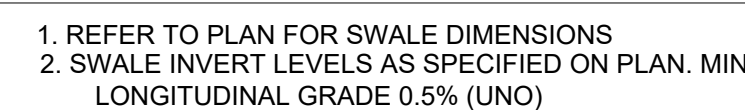
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STORMWATER DRAINAGE DETAILS - SHEET 1

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PROJECT	FOREST LODGE WARRIEWOOD

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TITLE	STORMWATER DRAINAGE DETAILS - SHEET 2
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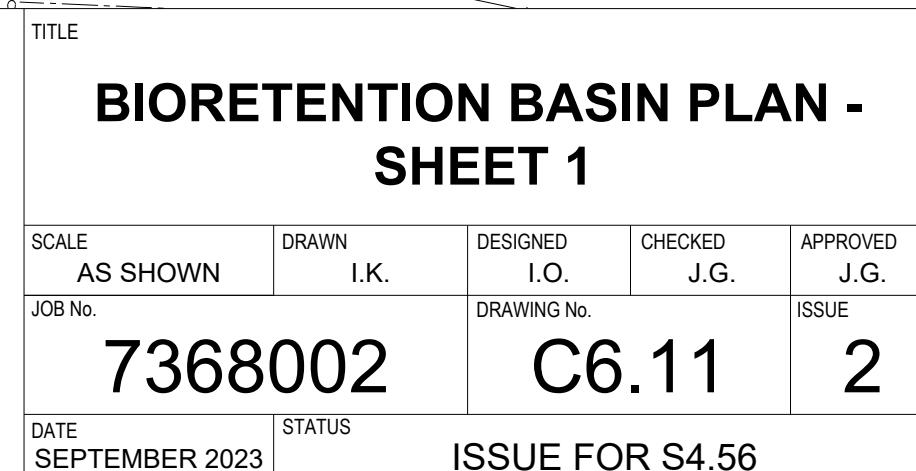


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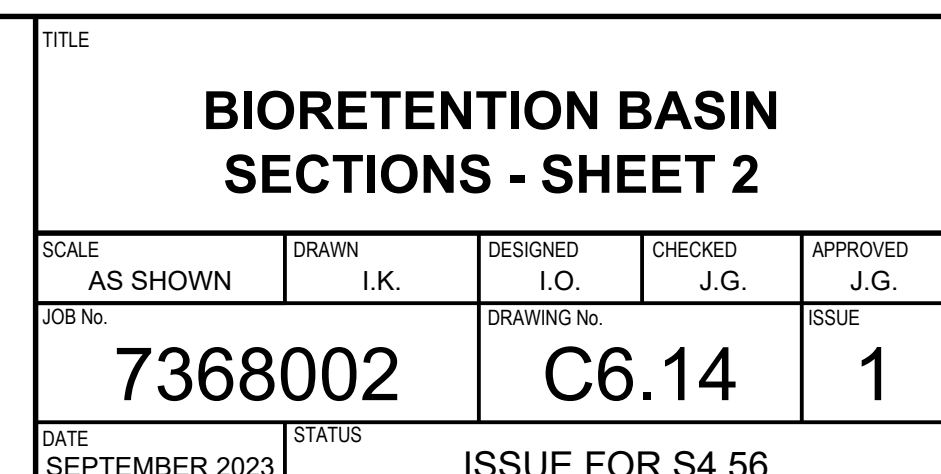
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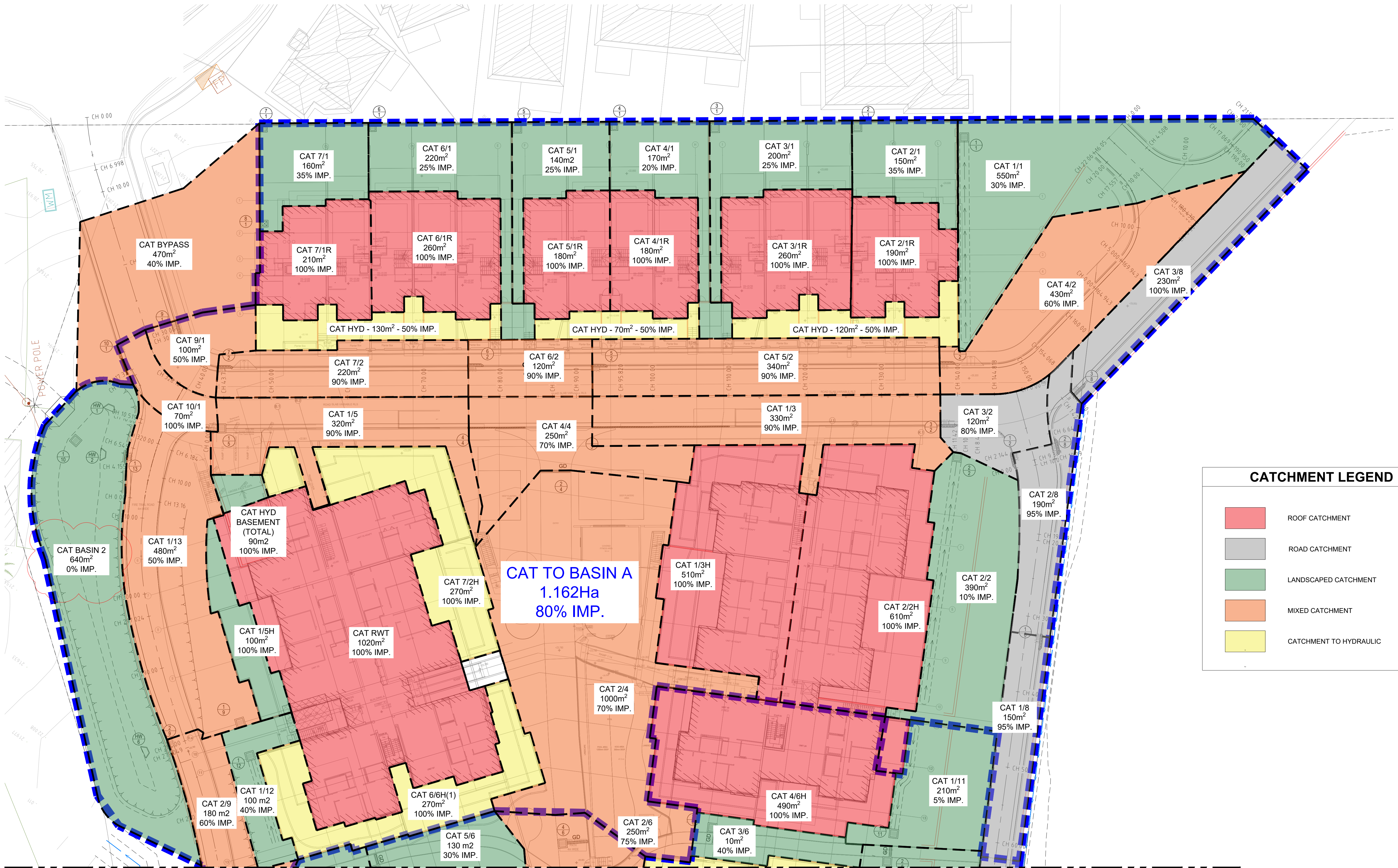




1000 0 500 1000 1500 2000mm
PLAN SCALE 1:50 A1 SHEET

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CATCHMENT LEGEND

	ROOF CATCHMENT
	ROAD CATCHMENT
	LANDSCAPED CATCHMENT
	MIXED CATCHMENT
	CATCHMENT TO HYDRAULIC

REFER C6.22 FOR CONTINUATION

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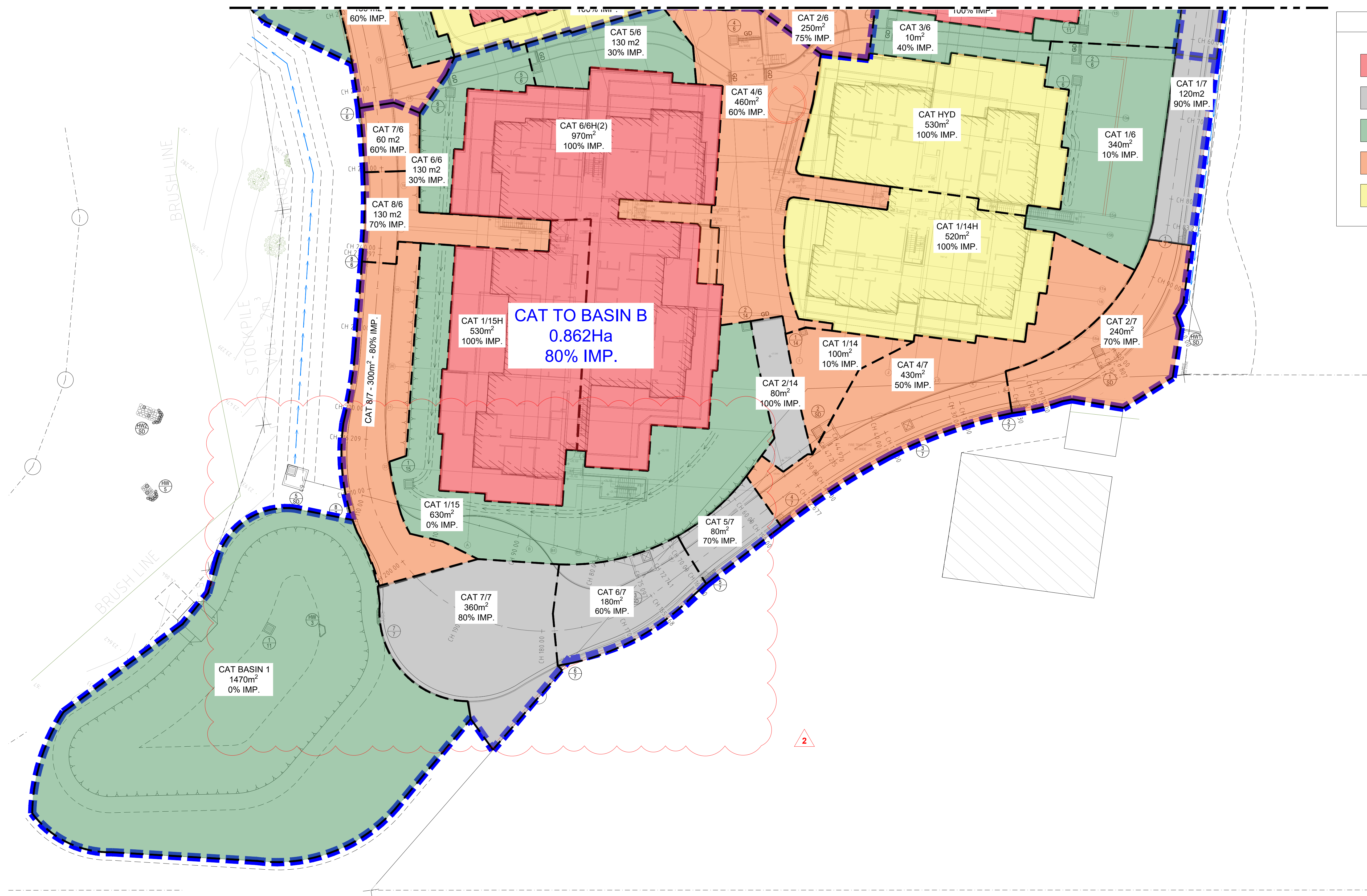
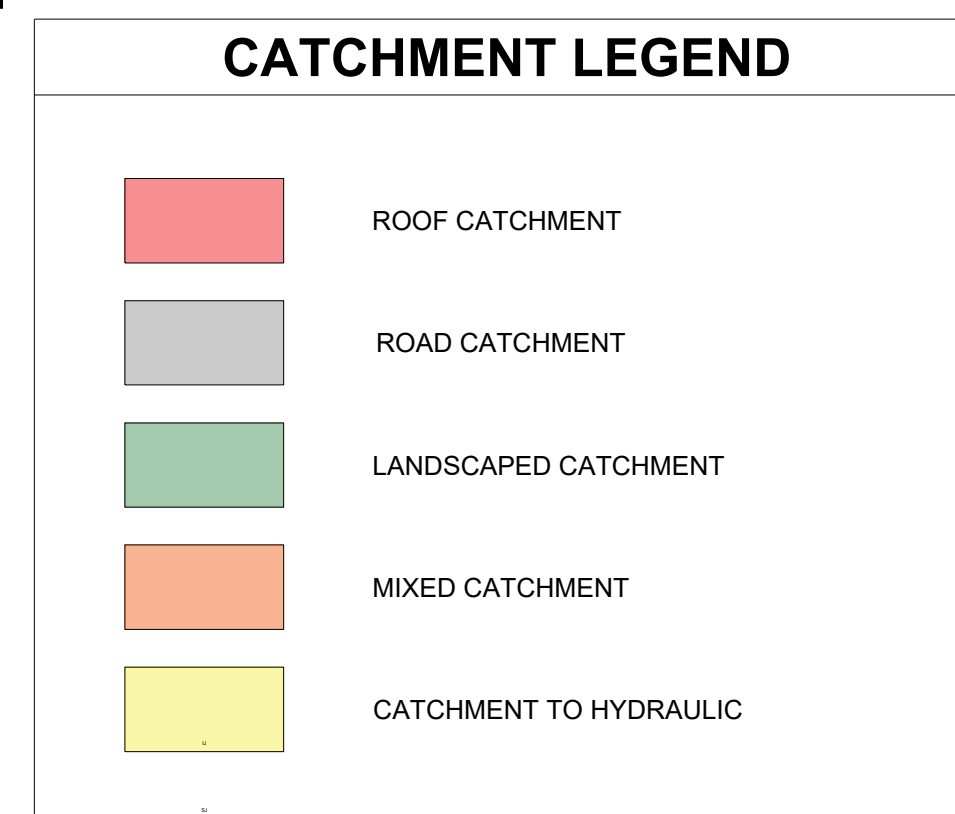
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STORMWATER CATCHMENT PLAN - SHEET 1

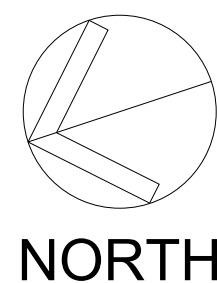
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5.0 0 2.5 5.0 7.5 10.0m
PLAN SCALE 1:250 A1 SHEET

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						2
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